Frederikssted: Archaeology of a Former Danish Plantation at Dodowa, Ghana

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A thesis submitted in total fulfilment of the requirements for the degree of

Doctor of Philosophy

Archaeology program

School of Humanities and Social Sciences

College of Arts, Social Sciences and Commerce

La Trobe University, Bundoora, Victoria, 3086, Australia

October 2017

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Abstract

The appearance of Europeans on the Gold Coast in the fifteenth century marked the beginning of Ghana's incorporation into the global economic system. The introduction of 'colonial agriculture' or plantation agriculture by the Danes in the eighteenth century led to an increase in purchasing and keeping slaves not only to work in these plantations but also to provide headload transport of agricultural produce and other trade goods from the interior to the coast. The provisions trade gave impetus to the development of the plantation system which was meant to replace the slave trade.

This thesis provides the platform for understanding the integration of the documentary and the archaeological data resulting from different contact situations that occurred between the Danish colonials and the indigenous town of Dodowa, Ghana, in the Gold Coast between the eighteenth and the twentieth centuries. This thesis examines the documentary and the archaeological data of one of the earliest Danish plantations (Frederikssted plantation) established in 1794 in Dodowa. The approaches explored in the thesis include *historical archaeology*, *plantation economy*, and *culture contact.* These were meant to evaluate the nature of plantation life as it was lived by both the Danish planters and African people who occupied the Frederikssted plantation site at different times. The thesis reveals that the Frederikssted plantation site represents different episodes of occupation, abandonment, and reoccupation. Indigenous local elites who reoccupied the plantation (after its collapse in 1802) have played a crucial role in shaping the plantation landscape, which provides a new way to understand plantation archaeology in Ghana and other parts of the world.

Statement of Authorship

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

David Akwasi Mensah Abrampah

October 2017

Acknowledgements

First and foremost, I would like express my heartfelt gratitude to my affable supervisors for their proficiency in my topic area and for guiding me during the writing process. Professor Susan Lawrence, my primary supervisor has been very instrumental reading the entire thesis and her comments have been indispensable in the shaping of this thesis. I am also thankful to my co-supervisor, Dr Nicola Stern who made many helpful suggestions to get the thesis on track. I was just privileged to have them both as my supervisors.

I would like to acknowledge the kind support from La Trobe University's Internal Research Grant (IRG) that was given to me to support this research. I would also like to thank the University of Ghana for the financial support from a Faculty Development Grant to enhance the fieldwork aspect of this research. I also owe a particular debt of gratitude to the members of the research team who volunteered to assist me with excavations. Particular mention can be made of Christiana Wulti, Kwabena Akuamoa, Edward Nyarko, George Anokye, Isaac Adisa-Atta, Mahmoud Belko, Hannah Asamoa Mensah, Desmond Osei-Tutu, Gedion Agyare, Alex Annor (driver), Bossman Murrey (who also helped with the faunal analyses) and Mr. L.B Crossland who helped in the analyses of the European materials.

I must also acknowledge the support of the following persons and institutions who visited the excavation site and showed profound interest in the research: Mr Ben Adesa (Survey Department, Accra), Professor Nii Adjiri Wellington (Dept of Archaeology, University of Ghana), Dr. Susan Wilcox (visiting scholar from New York), the Shai-Osudoku District, and Obunu Radio (Tema). I also appreciate the interest shown in archaeology by students of Ghanata Senior High School in Dodowa, some of whom might be future archaeologists.

Chapter 1

Background Information to the Study

1.1 Introduction

The search for a comprehensive characterisation of what constitutes archaeo-historical heritage of the Danish imperialism in the Gold Coast is a crucial venture in reconstructing Ghana's colonial history. The Danish-Ghanaian archaeological heritage gained prominence in the early 2000s when Dr. Yaw Bredwa-Mensah initiated archaeological research to study the Danish presence in the Gold Coast. The expansiveness of the research led to the discovery of a number of old Danish plantation settlements. Historical and archaeological researches have shown that between 1788 and 1850 the Danes established plantations along the estuary of the Volta River and in the foothills of the Akuapem Mountains in the south-eastern Gold Coast and used the labour of enslaved Africans to cultivate them.

In 1803, Denmark and Norway abolished the trans-Atlantic slave trade, which took effect on 1st January 1803. However, this did not end slavery itself in Africa. Intensification of cash-crop agriculture on the West African coast by the Danish colonists provoked an upsurge in the local slave trade. As the Danish plantation economy solidified, increasing numbers of enslaved people were engaged to labour in these plantations in Ghana. This dissertation focuses on the archaeological investigations of the Frederikssted plantation settlement founded in the eighteenth century in Dodowa. It seeks to explore and harness the historical and archaeological heritage resources in the area. Frederikssted and other Danish plantations are part of the building blocks of long-term cultural contact spanning almost two centuries (1658-1850) between Denmark and Ghana, and they offer this dissertation the opportunity to gauge the continuities and discontinuities in contemporary Dodowa.

1.2 Research Aims

This thesis investigates the Danish colonial/plantation system in Ghana. One of the main aims is to examine the intersection of the Danish plantation economy, culture contact, and historical archaeology in Ghana. The study of culture contact resulting from Danish

colonisation/ plantation economy fits well under the broad topic of historical archaeology. We therefore have the opportunity to study the material remains of European plantation owners and different categories of Africans who lived on the Frederikssted plantation landscape. The second aim compares the Gold Coast/Danish plantations and the New World plantation system. Therefore, the Danish plantation system and the associated slave lifeways in the Gold Coast have been contrasted with those of the New World to determine variations and similarities of slave living conditions in Africa and the New World. The comparative study contributes to the interpretation of how the enslaved Africans who were of similar cultural backgrounds adjusted and integrated differently on the plantations in the two Atlantic areas.

1.3 Research Objectives

The thesis explores the nature of the Danish overseas establishments on the Guinea Coast. Specifically, it focuses on the Danish slave plantation system in Dodowa in order to understand the plantation life of both the Danish planters and Africans who lived on the plantation landscape. It is an objective of this thesis to use the material culture from the archaeological investigations to provide information about European ways of life as well as the African ways of life on the Frederiksted plantation landscape at different times.

The thesis further discusses the after-effects of Danish plantation economy in Dodowa. These include the importance of trade and exchange to the Dodowa local economy, because the Lower Dodowa suburb of the town became famous as a residential area for Danish, local and other European merchants. The resultant culture contact of the Danish plantation system in Dodowa also led to the development of acculturative behaviour of the nineteenth century local merchants in Lower Dodowa as well as those who reoccupied the Frederikssted plantation site after the plantation shut.

Therefore one essential component of this thesis is to assess how the post-plantation occupation/period is critical to the interpretation of plantation archaeology. The Frederikssted archaeological data provide important information about the reuse of plantation landscape by free local elite. These local people reoccupied and lived on the plantation site after it collapsed in 1802, and left material culture which has played important role in understanding post-plantation/slavery phase of Frederikssted and Dodowa as a whole during the nineteenth century.

The study also compares the Gold Coast/Ghana and the New World slave plantation system. This component of the research stresses the study of the African elements in the New World who lived in diaspora communities in the Caribbean, North America, and South America. These world areas have developed as a mixture of several peoples, the Amerindians, Europeans, and Africans. People of African descent form substantial communities in these areas and have existed continuously since at least 1501 (Posnansky 1984, p.196), as a result of involuntary transportation of Africans to work in similar plantations in the New World. Even though the African plantation slaves in the New World were under intense subjugation, they still maintained their cultural identities including languages, religions, and oral traditions, as well as the skills and the knowledge of their forebears.

1.4 Research Questions

The thesis seeks to answer questions regarding how the Danish political and plantation economy on the Gold Coast in the eighteenth century enslaved Africans in order to facilitate interpretations of plantation slavery and its legacies at Dodowa/Frederikssted plantation site. Questions being pursued include: to what extent can the material culture from the plantation site shed light on issues related to the European/planters' life-ways? To what extent are the Danish plantations in the Gold Coast similar to and different from the New World plantations? How can the material culture shed light on the life of the free (unenslaved) local people who occupied the plantation site after the plantation closed? What are the Danish post-plantation/colonial legacies in Dodowa?

The archaeological investigations have the potential to provide information to show how the Danish planters lived and established control over the enslaved African labourers. On the Frederikssted plantation landscape the planter dominance and control are evident from management of architectural spaces and possibly food-ways. In examining the Danish contact with Ghana in an analytical framework, it is useful to know: What was the nature of the Danish overseas establishments on the Guinea Coast? What material correlates of the Danish encounter on the Gold Coast are manifested archaeologically? Evaluation of these concerns provides useful reference points for assessing European cultural influences on West African societies. By way of becoming part of the global economic system, how

did Dodowa indigenes respond to European material and nonmaterial culture as a result of the culture contact that ensued between them and the Danes and other Europeans? The European arrival on the West African coast in the late fifteenth century led to economic and cultural interactions. It led to the introduction of materials such as metal goods, cloth, alcoholic drinks and European style of architecture to West Africa. Western forms of education and worship (Christianity) were also introduced to West Africa by the Europeans. As a result of the culture contact that supervened between the Danes and the indigenous Dodowa inhabitants, the local people started responding to European material and nonmaterial culture.

In exploring the issue of plantation life at Frederikssted plantation, the thesis addresses the question of similarities and dissimilarities between Frederikssted plantation and the New World plantation systems. The involuntary transportation of Africans to the New World during the trans-Atlantic slave trade resulted in the formation of Afro-American communities in the New World. These new arrivals of enslaved Africans worked in plantations just as the Frederikssted plantation slaves did in Africa. A comparative study between Africa and the New World plantation system is essential to this research in order to ascertain the differences and similarities that existed in the plantation system of these two different world areas.

The thesis further explores how the material culture can be used to examine the presence of free people who lived on the plantation landscape after the collapse of the plantation. These were local people who were not enslaved but considered the plantation site as a comfortable place to live and trade. I have therefore not limited the interpretation of the Frederikssted material culture to slaves and their master(s). Plantation archaeologists in different parts of the world have often overlooked the third category of plantation occupants, and in doing so, scholars' perception of slaves and their masters remains the dominant research theme in plantation research. This thesis explores the question of how slave plantation sites could serve as accommodation units for other people who were neither slaves nor plantation owners. The research has revealed that after the plantations collapsed, other people who found them convenient dwelling places reoccupied the extant empty physical structures. These latter occupants also left material culture, which is not to be confused with materials related to slaves and their masters during the plantation era. However most plantation archaeologists have overlooked the impacts of these later

occupants, and have interpreted all artefacts as belonging to either slaves or masters/planters or at least have considered only the plantation phase and have not looked at subsequent use.

1.5 Significance of the Study

The focus of this thesis on Frederikssted plantation supports increasing attention to more recent archaeological works that have been carried out on some of the Danish plantations in Ghana. The project particularly builds on a growing emphasis on the archaeology of plantation agriculture and slavery in the Gold Coast (Bredwa-Mensah 2002, 1996, Boachie-Ansah 2007b; DeCorse 1993). The research directions of these earlier researches which have been explored have focused on slavery and plantation life. In this thesis, however, I have broadened the scope of plantation slavery studies by exploring the Guinea trade, thus, European (slave) trading activities in Atlantic Africa, the provisions trade, which was precursor to plantation slavery in West Africa, internal slavery in the Gold Coast, and slave sites in the New World plantations.

This thesis also examines new ways of interpreting plantation finds, thus plantation life after the plantations collapsed. Consequently, I argue that the evaluation of the issue of reoccupation by free and unenslaved people at most plantation sites should be highlighted in the interpretation of plantation material culture. This is because most plantation archaeologists have previously glossed over the issue of reoccupation at slave plantation sites. In many cases, especially in the New World, it might be that sites were reoccupied by freed or former slaves. It has been observed from the Frederikssted archaeological data that the Frederikssted plantation landscape contains deposits that date to the period after the collapse of the plantation and the emancipation period. This therefore suggests a significant degree of continuity between the plantation/slavery period and the post plantation or emancipation period.

Beyond the archaeological and historical significance, the Frederikssted research project also has local and practical importance in the area where it has been carried out. Officials of Shai-Osudoku District Assembly intend to harness the natural and cultural potential of the Dodowa Valley area where Frederikssted plantation is located for tourism development. This is a kind of self-reflection in making plantation archaeology more relevant to the wider public (Farnsworth 1993, p. 114). This suggests a solution to Potter's

(1991, p. 101; Gibb 1997, pp. 52-23) argument that (plantation) archaeology has been carried out in an unreflective manner thereby denying concerned communities the benefit from archaeological research. It is a burning desire of the district that Frederikssted plantation settlement and the Dodowa Valley be restored, conserved, and preserved. Their intention is in consonance with Ahern's (2006, p. 122) call for defensive and offensive strategies aimed at salvaging the ever-decreasing cultural and natural landscapes. The offensive and defensive strategies that need to be implemented basically involve "putting nature back and history back" into the landscape (Ahern 2006, p. 123). These strategies further rely on planning knowledge, knowledge of ecological and historical restoration, and significant public support and funding. The attempt of putting nature and culture back into the landscape, according to Ahern (2006, p. 121) gives better perception of the landscape as an interface of natural and cultural processes. It is my hope that my research will contribute significantly to the public archaeology initiative that the district wants to undertake.

1.6 Europeans on the Gold Coast

The first episode of sustained contact between the Gold Coast/Ghana and Europe began with the arrival of the Portuguese in Elmina (formerly Edina) in 1471 (DeCorse 2001, p7). This was facilitated by extensive explorations under the leadership of Prince Henry the Navigator of Portugal. Successive expeditions sent to the West African coast led to the discovery of Elmina. The Portuguese named the coastal town of Edina as *Elmina* (meaning 'the mine' in Portuguese) due to the abundance of gold in the local town of Edina. Their initial motive therefore was to deal in gold with the local people.

After obtaining permission from the local chiefs, the Portuguese founded their first permanent settlement, Elmina fort, in 1482 (Norreggard 1966, p. 3; DeCorse 2001, p. 7). Today Elmina castle is still extant as one of the numerous physical traces of Portugal's exploration in West Africa. Apart from the physical structures there are some Portuguese linguistic forms such as place names (*Elmina*) and some Portuguese vocabulary still in use in present day Ghana. These verbal influences have been incorporated into some local languages in Ghana. The Portuguese enjoyed monopoly on the Gold Coast for over 80 years profiting immensely from the gold and slave trade.

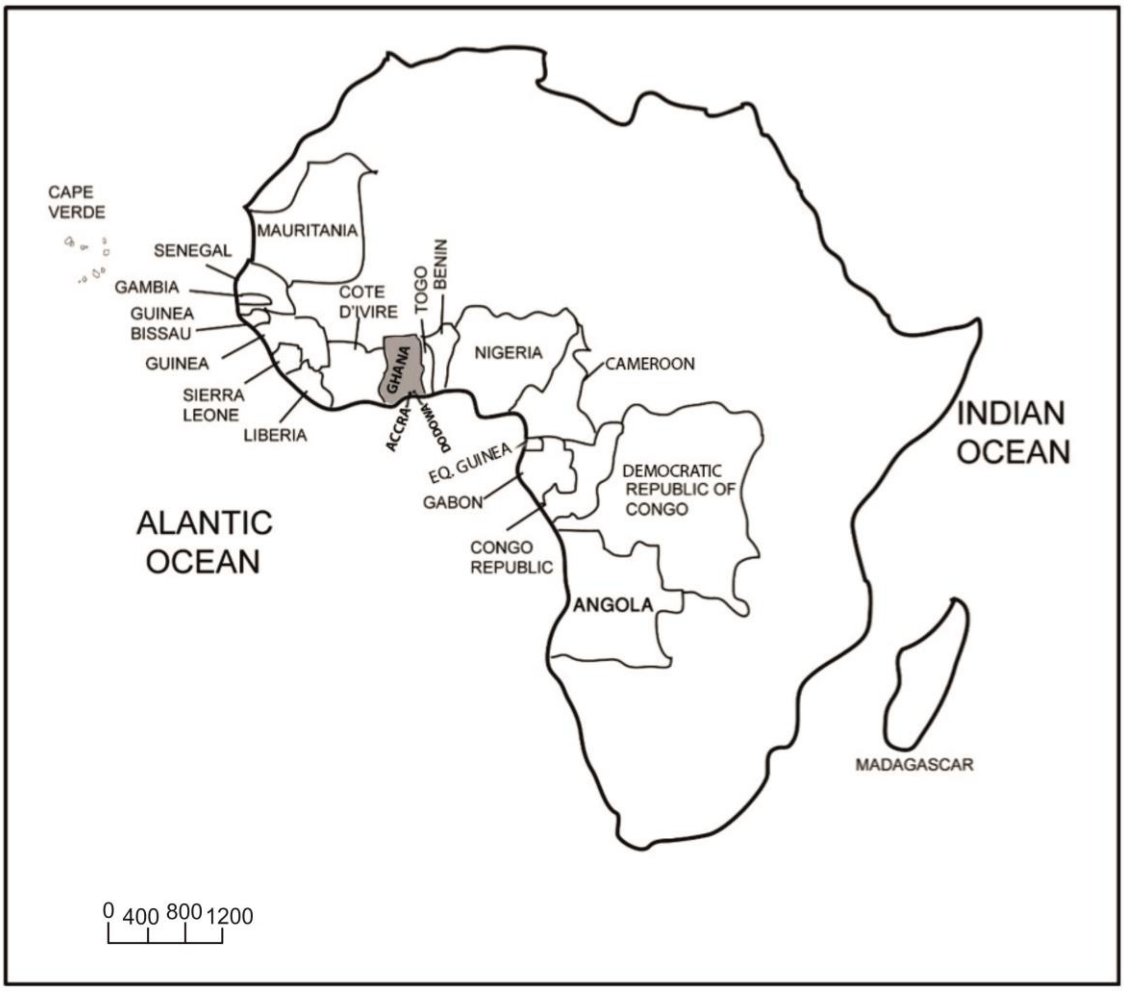

Figure 1.1: Map of Guinea Coast/Atlantic Africa

In 1553, however, the first English expedition to Guinea was launched under the leadership of Thomas Windham and Antonio Anes Pinteado (Norreggard 1966, p. 3). The English were soon followed by the Dutch. The first Dutch ship, *de Maagdt van Enkhuisen*, is said to have arrived in the Gold Coast in the years around 1593-94. The Dutch maintained a stronghold in Elmina after they conquered the main Portuguese stronghold of Elmina by a mixture of deceit and violence. The Dutch gained an overpowering advantage over the other European powers on the coast because by about 1590 English enterprise had also slackened, and the Portuguese were eventually forced to give up all their forts in the Gold Coast in 1641 (Norreggard 1966, p. 3).

The Danes on the Gold Cost

The Danes first arrived in the Gold Coast in the course of the seventeenth century. The first successful voyage by a Danish ship to Guinea is reported to have taken place around 1649 (Norregard 1966, p. 12). However, the Danes established a more sustained contact in 1671 when Denmark established the West India and Guinea Company. The company was tasked with the responsibilities of trading and colonisation, and to administer the Gold Coast colony on behalf of the Danish crown. The Danes stayed in the Gold Coast continuously until 1850 when they sold all their possessions to the British and left the Gold Coast.

It was during the period of the Dutch domination on the Gold Coast that the Danes also became part of the players that were in competition for the West African coast. As the Gold Coast was divided into petty states the Danes decided to concentrate their activities in two different areas along the coast. At the west coast, they forged alliance with Fetu near Elmina and to the east, the Danes chose Accra and its east coast where they established many of their trading posts and plantations. The Danes are known to have established more than thirty forts, and over twenty farms/plantations on the Gold Coast (DeCorse 1993, p. 149). Apart from the plantations that were established at the Akuapem Mountains, all the Danish forts at the coast had large farms attached to them which were all cultivated by African slaves who were kept at the forts. The Danes maintained these outposts from 1659 until 1850, during which time they dominated the African-European trade between Accra and Keta to the east (DeCorse 1993, p. 150). Denmark thus became one of several European nations who competed for West African trade between the seventeenth and nineteenth centuries. Traces of extant ruins of Danish outposts such as forts, trading lodges and plantations on the Gold Coast are seen as playing an important role in the development of African-European relations in the West African sub-region.

The first Danish headquarters was Fredriksborg at Cape Coast, named after Frederick III (King of Denmark and Norway 1648-70)**.** The Danes further extended their influence on the Gold Coast and established other outposts which were of varied sizes and importance. Notable among them were those that were established at Legu, Osu, Labadi, Teshi, Old Ningo, Trubreku, Ada, Keta and plantations at the base of the Akuapem Mountains. Even though the Danes established some outpost like lodges which they briefly operated at Bagos on the Sierra Leone River and Sao Tome, their main interests in West Africa were

concentrated almost entirely on Accra and the eastern Gold Coast/Ghana (Norregard 1966, pp. 25-30). As the Danes made their incursions in the seventeenth century (1658), they established agricultural plantations on the Gold Coast from the turn of the eighteenth century to the mid-nineteenth century. They exported tropical crops for processing and consumption in Denmark and the West Indies. This was an attempt by the Danes to put an end to slave trafficking across the Atlantic Ocean. However, enslaved Africans were used by the Danes to cultivate these plantations which were located in the foothills of the Akuapem Mountains and along the estuary of the Volta River (Bredwa-Mensah 2004, p. 203, GarlicK 1971, Hopkins 2012, 2009, Justesen 2003, 2005, Kea 1982, 1995). This provides the context to understand the circumstances under which slave trading and commercial agriculture thrived in the Gold Coast and West/Atlantic Africa as a whole.

In the middle of the nineteenth century, however, the Danish plantation system in the Gold Coast experienced a downturn mainly due insecurity emanating from Asante wars, unfavourable climatic condition, and poor soils (Awadzi et al 2002, p.40; DeCorse 1993, p. 155). Consequently, in 1850, the Danes sold all their possessions (plantations and trading forts) to the British, and the Danes left the Gold Coast the same year. The British, based on their assessments of the economic viabilities of these former Danish possessions, abandoned some of them while others were modified. A detailed discussion on Danish plantation system in Dodowa can be found in Chapter 3

1.7 Background to Plantation Archaeology

Plantation agriculture has generally been defined as a large-scale, mostly foreign-owned and specialized high-input/high-output farming system that is export-oriented (Courtenay 1980; Goldthorpe 1987, 1994; Hartemink 2005). Plantation agriculture has also been referred to as a type of farm of over 100 hectares (247.105acres) in size, with a specialized management team in charge of a labour force with specialized production techniques (Tiffen & Mortimore 1988). Stephens *et al* (1998) offer a definition which defines plantations as areas that are typically mono-cropped with perennials, producing tropical or subtropical products that commonly require prompt initial processing and for which there is an export market. Thompson (1975, p. 18-19) distinguishes plantations from farms by describing farms as normally agricultural establishments that depend mostly on the families concerned for the supply of labour with few or no farm-hands from outside. The produce produced from farms are mainly for subsistence and domestic consumption.

Nonetheless farms could sometimes be developed into plantations or occasionally the characteristics of farms can overlap with plantations (Singleton 1985, p. 2), making some farms transitional phases of plantations.

In an attempt to understand the beginnings of plantation agriculture in the Americas, Hartemink (2005, p. 11) notes that plantations started in the sixteenth century when the Portuguese colonized and settled in coastal parts of Brazil. In Atlantic Africa, the first plantations based on enslaved African labour were on Cabo Verde. This happened when the Cape Verde islands were settled by the Portuguese around 1462 (Green 2013, p.85). This early trade in enslaved Africans then feeds into the emerging trans-Atlantic system which gained currency in later period. Slaves were used in the cultivation of sugar cane which was sent back to Portugal for sale. This fits well with the plantation definition offered by Degler (1979, p. 11) which describes plantations as agricultural enterprises that engage a number of workers who are of subordinate class, and work as a team to produce agricultural produce for someone superior, and the produce is usually sold in an international market. This concept of plantation system forms the basis of this thesis and is in line with Courtenay's (1980, p. 10) supposition that a plantation is at "once ecosystem, agricultural system, economic systems, social and cultural systems". This is because one of the main goals of archaeological study of plantation systems is to seek to explain plantation history and cultural processes from plantation life as it was lived by different social groups on the plantation landscape (Singleton 1985, p. 2).

Plantation archaeology was first undertaken in the USA and later spread to the Caribbean and Africa. The beginning stages of plantation archaeology saw archaeological investigations being designed to examine material culture associated with plantation owners/managers (Caywood 1955). However, the research agenda of plantation archaeology shifted from planter sites archaeology to slave sites archaeology mainly due to the aftermath of agitations by historians, scholars and other interest groups with focus on subaltern groups such as slaves (Ferguson 1992, p. xxxvi; Fairbanks 1984, 1983, 1972). Issues related to slavery became the primary focus in plantation archaeology research during the 1960s, particularly in Afro-American history. The effect of this new approach is that it has made modern day plantation archaeology focus not only on planters' lifeways but all the different social groups such as plantation owners, managers and slaves as well as *free* people who resided on the plantation landscape.

This study is a significant sequel to earlier archaeological works in Ghana such as Bredwa-Mensah's (2002, 1996a) on Frederiksgave plantation and Bibiase plantation respectively, Boachie-Ansah (2007b) on Brockman plantation and Decorse (1993) on Daccubie plantation, all located at the Akuapem Mountains area in Ghana. These earlier studies, particularly Bredwa-Mensah (2002, 1996a), seek to examine both planter and slave sites and have used the material and non-material culture to analyse social class on the plantations. The studies have also incorporated the archaeological study of how slavery fits into the plantations' social structures, and their works have influenced and will continue to influence research directions of all successive plantation archaeology in Ghana. My study of the Frederikssted plantation at Dodowa expands the geographic and cultural contexts in which the Danish planters and enslaved Africans have been studied and increases archaeologists' understandings of Danish plantation slavery and its ramifications in Ghana. It further provides insights into the context in which culture change occurred within African populations (DeCorse 1993, p. 149), particularly, in Dodowa and its environs due to the Danish plantation economy in the area.

1.8 Sources of Information on Danish Plantations in Ghana (1788-1850)

Two types of sources of information have been available to understand the Danish plantation system in the Gold Coast. These sources are historical/documentary sources and archaeological sources. Historical sources reviewed in this thesis largely comprise works by Danish historians who have compiled both eyewitness accounts and secondary accounts about Danish colonial activities in the Gold Coast. The archaeological sources comprise the examination of the material culture from archaeological excavations carried out by foreign and Ghanaian archaeologists at four of the Danish plantation sites located at the Akuapem Mountains area north-east of Accra.

1.8.1 The Historical Sources

The historical sources have sought to suggest that plantations in the tropical climates of West Africa were meant to eliminate any justification for the trans-Atlantic slave trade and further serve as a replacecment to the trans-Atlantic slave trade (Hernæs 2011, Jeppesen 1966, Norregard 1966, Winsnes 1992). This was the idea of Isert (Danish surgeon and botanist in the Gold Coast) who showed open dislike for the trans-Atlantic slave trade, and in 1787 he suggested plantation agriculture which to him was more

humane and possible replacement to the slave trade. This confirms the assertions made by various scholars in later period that Denmark with its satellite Norway was neck-deep in the trans-Atlantic slave trade that exported large number of slaves from the Gold Coast to the West Indies (Hernæs 2011, Norregard 1966, Winsnes 1992, RØmer 1925, Hansen 2006).

History of Danish settlements in Ghana; Norregard (1966)

Norregard (1966), publishing nine years after Ghana's independence (1957), narrates the history of occupation by one of the colonial powers (Danes) who enjoyed a longer stay in the Gold Coast than many people had thought. In a prefatory statement, Daniel F. McCall states that the Danes lived in the Gold Coast for 192 years beginning from when they took over Swedish forts in 1658 and stayed continuously until 1850 when they sold all their possessions to the British and left the Gold Coast altogether (Nørregård 1966, p. xi). Norregard recounts that the Danish mission in the Guinea Coast was characterised mainly by amassing the bounty that abounded in the region. In the beginning paragraph, Norregard (1966) states that the Danish Guinea Coast venture was a

> tale of sun and wealth, adventure and excitement, and abundance and luxury. There was a time when ships left Danish settlements on the coast of Africa, bearing cargoes of gold, ivory, slaves, precious woods, tropical fruits, and innumerable curiosities never before seen in Scandinavia. Those who returned home from a voyage to the Gold Coast would describe for days and nights the wonders of the tropics, all the adventures and dangers they had experienced, and the splendours they had seen (page xi).

In this sense, the Danish colonials in the Gold Coast exploited both natural and human resources and repatriated them to Denmark to service the Danish economy. The above description of the Danish mission is essential for the typification of the nature of the Danish colonial activities in the Gold Coast. It gives the impression of a rather propitious enterprise, which perhaps encouraged them to stay in the Gold Coast for almost two centuries.

Norregard's descriptions of the Danish plantations are sometimes confusing. On page 174 Norregard confuses Frederiknopel plantation with Frederikssted by saying that Frederiksnopel was later called Frederikssted, which is inaccurate and misleading. The

confusion can be resolved by the names and layout/plan of the two plantations. On Frederiksnopel plantation, Isert had wanted to build a whole settlement "city". That is why he called it *Frederiksnopel* meaning 'Frederik's City'. On the other hand, *Frederikssted,* meaning Frederik's house (which comprises a single stone building), has never experienced any change of name. It is therefore difficult to accept that *Frederiksnopel*, 'Frederik's City', became *Frederikssted* 'Frederik's house' (a 'city' becoming a 'house').

In the surveys of Jeppesen (1966) as well as Møller-Jensen *et al.* (2008), it is clear that Frederiksnopel never transformed into Frederikssted, and Frederikssted has always been in Dodowa. This is contrary to Norregard's assertion that Frederiknopel later assumed the name Frederikssted. However, Norregard's book *Danish Settlements in West Africa, 1658-1850* (1966) is a commendable effort in presenting a comprehensive appraisal of the Danish contacts with West Africa.

Per Hernæs (2011, 2013)

In recent times, Per Hernæs (2011, 2013) was armed with the belief that a satisfactory in-depth study and analysis of the Danish plantation system in Ghana (especially Frederiksnopel plantation) was still lacking in spite of numerous publications in previous years. Based on a scrutiny of primary archival sources, Per Hernæs presents a micro-historical analysis of different fascinating aspects of Frederiksnopel plantation established by Paul Erdman Isert in Akuapem in 1788.

According to Hernæs (2011, 2013) the whole Danish plantation idea beginning from the late eighteenth century was couched unambiguously within the colonial framework. This was better understood as 'a Danish settler colony in Africa', the purpose of which was to fashion the relationship between Denmark and Africa that involved acquisition, consolidation and expansion of territories in Africa. The plantations were thus not seen as engendering African production but European production in Africa. Agricultural production was therefore to be the backbone of the colonial enterprise in order to make the colony self-sufficient and also minimize Danish state expenditure (Hernæs 2011, p. 87). After obtaining state support, which culminated in the successful commencement of the first (Frederiksnopel) plantation, Hernæs (2011) delved into detail assessment of the Frederiksnopel plantation enclave with regard to its internal social relations and slave life,

and its relationship with the Danish slave trade establishment at Christiansborg in Accra. Hernæs (2011) also describes the relationship and the interactions that ensued between Frederiksnopel and other African societies at the Akuapem area where the plantation was located.

Hernæs (2011) provides information on sex, name, origin, health, age and estimated value of the slaves, which he used to put together in table form for clear understanding. A total of 32 slaves were extracted from among the fort slaves at Christiansborg and sent to Frederiksnopel over the years, but a good number were infirm resulting in a high mortality rate. Hernæs (2011) makes mention of 13 slave deaths during the period 1789-1792 (8 women and 5 men), which means that 40 percent of the total 32 slaves died during their stay at the Frederiksnopel plantation. Funerals were held for both Europeans and the African slaves who died on the plantation. Hernæs (2011, p. 123) asserts that the actual number of slaves who lived and worked on the plantation at any particular point in time did not seem to have exceeded 20.

Hernæs (2011) paints a picture of the slaves living in comfortable conditions at Frederiksnopel by reiterating that the slaves were given plots to cultivate for their own food resources, and housing was provided for them. He provides a description of a slave village comprising 14 huts at Frederiksnopel. Besides, the slaves enjoyed some form of basic 'social security', whereby incapacitated or old slaves unable to work received a small pension. The slaves were also offered medical care when they fell ill and sometimes rum was even distributed to the slaves. The slave community at Frederiksnopel also celebrated childbirth, which was regarded as a festive occasion. The Frederiksnopel plantation also enjoyed friendly relations with Akuapem because of Atiembo's (king of Akuapem) close association with the Danish administration. By these assertions, it is difficult to reconcile why there were so many deaths on the plantation but Hernæs attributes the high death rate to smallpox disease that ravaged the plantation (Hernæs 2011, p. 124).

Hernæs (2011) draws on deep archival research concerning the first Danish plantation in Ghana. He seems to have answered most of the questions left unanswered in the earlier scanty descriptions with regard to plantation life at Frederiksnopel. However, one cardinal issue perhaps glossed over by Hernæs is life after the collapse of the plantation. It is difficult to fathom what happened to the slaves after the collapse of Frederiksnopel.

The extensive archival research was an opportunity to gauge the fate of the remnant enslaved Africans whose statuses were changed from fort slaves to plantation slaves.

Hernæs (2013, p. 178) recounts that though Frederiksnopel was a failed attempt to establish commercial agriculture, its importance as a beacon for further Danish initiatives was crucial. However, in an attempt to connect the story of Frederiksnopel to Frederikssted, Per Hernæs give a confusing account of the exact date that Frederikssted was established. The assertion that Flidnt and Woodard laid out Frederikssted plantation in 1793 and it collapsed in 1794 is at best misleading. It is also worth mentioning that Hernæs (2011, 2013) acknowledged that the failure of Frederiksnopel was not necessarily due to Isert's untimely death. Later events and experience showed that Africans were more successful than Europeans in identifying and developing the best prospects for commercial agriculture. It was commonplace during the colonial period that African farmers, rather than European planters or colonial officials, pioneered the development of palm oil business as well as cocoa-farming (Law et al 2013; Hernæs 2011, 2013).

1.8.2 Archaeological Survey

Jeppesen (1966)

Perhaps the first archaeological survey work carried out to describe the Danish plantations in Ghana is that of Jeppesen (1966). Jeppesen's survey constitutes a clear description of some of the prominent Danish plantations that the Danes established as a replacement to the lucrative trans-Atlantic slave trade. In a brief historical background of the Danish plantation agriculture in Ghana, Jeppesen affirms that the Danish trading activities with Ghana between the sixteenth and eighteenth centuries were centred on gold and slaves with no interests in agricultural produce. In view of this, the idea of establishing plantations in Ghana must be seen as establishing an alternative venture to replace the trans-Atlantic slave trade. The plantations were located on top and at the base of the Akuapem Mountains up to the River Volta estuary at the south-eastern corner of the Accra region. Jeppesen used three different methods in his 1966 survey. The main method was field survey in which he physically visited, mapped and gave vivid descriptions of most of these former Danish plantations and other trading forts.

Jeppesen seems to have relied heavily on Danish archival sources about the Danish plantation system in the Gold Coast. He also depended on oral-historical accounts from the local people who lived in the vicinities of some the plantations during his survey in 1966. This enabled him to know which Danish merchant/governor established which plantation. Jeppesen describes the masonry ruins of the plantations in precise terms, giving the exact measurements in some cases. The various plants that were planted (vegetables, lemons, coffee, maize, cotton, tobacco, and tamarind trees) were also described in clear terms. Jeppesen also gives accounts of other plant materials such as indigo and oil palm that were collected from the wild. Trade in palm oil between the Danes and the local Akuapem people became one of the major undertakings that was associated with the Danish plantation economy. Jeppesen notes that the farmers at Akwapim became wealthy as a result of their involvement in the palm oil trade which gave them enough capital to start the growing of cocoa around 1890.

Jeppesen's survey undoubtedly gives remarkable accounts of the Danish plantations regarding their owners, which crops were planted, dates of their establishment and exactly where they were established. It must however be noted that Jeppesen's belief that the word 'Ytoto' (page 68) was a mispronunciation of the name Lutterodt can hardly be verified. Lutterodt is said to have set up De Forenede Brødre plantation but at the time Jeppesen conducted his survey in 1966 De Forenede Brødre had no extant ruins. Jeppesen seems to have believed whatever he was told during his interaction with the local people. Even though Jeppesen recorded eighteen Danish establishments comprising trading forts and plantations, he seems to have depended largely on Danish archives and local informants, without physically seeing some of the establishments he recorded. Local farmers have on many occasions facilitated the actual discovery of the physical ruins of some of the plantations. During the survey, Jeppesen failed to locate Frederikssted plantation though he had an idea that it was located in Dodowa. This probably accounted for his scanty description of Frederikssted plantation. Jeppesen (1966) also looked into palm oil trade between Akuapem people and the Danes from which he says the local people benefitted immensely. The description of the palm oil trade lacked the necessary details about how the trade was organised, how raw materials were procured, how the palm fruits were processed and how the oil was transported. A detailed description of the processes involved in the trade might be beneficial to the archaeologist by giving a hint about the material composition of the trade. Nonetheless Jeppesen (1966) offers an

invaluable contribution to the understanding of the Danish plantation economy as well as giving glimpses of the agro-economic history of Ghana.

1.8.3 Previous Archaeological Excavations on Danish Plantations in Ghana

Most of the archaeological researches that have been carried out in former Danish plantations in Ghana Bredwa-Mensah 1996a, 2002, Boachie-Ansah 2007b, DeCorse 1993) have sought to investigate the issues about plantation life in relation to slave life ways and planters' life ways on Danish plantations. These were to provide closely dated artefact assemblage of material culture associated with the European occupation, and also help build chronology of Atlantic period sites in coastal Ghana.

Daccubie plantation (DeCorse 1993)

The first effort in excavating a Danish plantation site was undertaken by Professor Christopher DeCorse who excavated the Daccubie plantation in 1987. Daccubie plantation is believed to be the biggest Danish plantation. Apart from its large extent, it was also the most successful plantation that yielded the highest production. In the ensuing publication under the title *The Danes on the Gold Coast: Culture Change and the European Presence*, DeCorse (1993) sought to concentrate the analysis of archaeological and historical data to European contact with West Africa with less focus on the excavated artefacts from the Daccubie excavations. DeCorse (1993) initially considered the kind of research questions and theoretical perspectives that have influenced archaeological studies of European expansion into different parts of the world including West Africa. This, he says, was as a result of maritime expansion of Western Europe which in the case of West African began in the later part of the fifteenth century (DeCorse 1993, p. 150). This brought about far-reaching changes in indigenous cultures of West Africa. DeCorse further acceded to the broader use of the term historical archaeology as not only refering to European documentary sources but also incorporating oral histories and traditions which are relevant sources of information in the context of African archaeology (Schmidt 1978, 1983).

DeCorse, therefore, in attempting to recount the Danish plantation system in Ghana (which falls within the remit of historical archaeology) uses copious documentary sources to elucidate the Danish interest in Ghana which included slave trade, 'legitimate trade' and agriculture. It is, however, not clear how many oral-historical accounts DeCorse

(1993) uses to complement the documentary and the archaeological data. Since Daccubie plantation is considered to be the most successful Danish plantation in Ghana, it may have involved an energetic labour force provided by enslaved Africans. Issues about slave labour and slave lifeways were hardly addressed. DeCorse (1993, p. 168) concludes that interaction between Danes and Africans before the nineteenth century was primarily for commercial purposes and not necessarily with a deliberate motive of cultural transplantation. The excavated materials and the conclusion drawn seem to describe the Daccubie plantation site as a semblance of a Danish trading centre rather than a slave plantation site. The whole excavations were overshadowed by historical and epistemological extrapolations to the detriment of detailed artefact analyses. Regarding the paucity of artefacts from the excavations, DeCorse (1993, p. 168) blames it on the characteristically small number of Danish officials who usually managed Danish outposts on the Gold Coast. Nevertheless, on the biggest and the most successful plantation (Daccubie), we might have expected many people who would usually leave myriads of material culture in the archaeological record. Professor DeCorse is, however, credited with the pioneering role he played in plantation archaeology in Ghana. The late Bredwa-Mensah who did subsequent researches may have benefited a great deal from this initial research by Professor DeCorse.

Bibiase and Frederiksgave plantations (Bredwa-Mensah 1996a, 2002)

Archaeological investigations carried out by Bredwa-Mensah (1996a) at Bibaise plantation and (2002) at Frederiksgave plantation (both located at the foot of Akuapem Mountains) seem to be the most extensive archaeological researches that have been carried out in Ghana to investigate the issues about slave life ways on Danish plantations. Though Bredwa-Mensah excavated the two plantations at different times, both studies had the same theme, which pivoted around slave life ways on Danish plantations in Ghana. The Bibiase plantation, which was initially established by a Danish merchant, Peder Meyer, around 1791 changed ownership (after Meyer) on three occasions from 1804 to 1826 among three governors on the Gold Coast: Christian Schiønning, Peter Svanne Steffens and Johan Christopher von Richelieu. The plantation yielded substantial amounts of cotton, oranges and coffee (Bredwa-Mensah1996a, p. 449; Jeppesen 1966, p. 55). Archaeological excavations were carried at a perceived slave settlement area that was attached to the plantation house. Locally made pottery, imported ceramics, beads, cowrie

shells, bottles, firearms, smoking pipes, metal objects, and faunal remains were recovered.

The Frederiksgave plantation, on the other hand, was established in 1831 and was also called the 'Royal Plantation' because it received the royal consent and later it was named after King Frederik of Denmark. It also played a dual role as plantation house and convalescent home for the Danes on the Gold Coast (Jeppesen 1966; Bredwa-Mensah 2004, p. 209). On Frederiksgave plantation, Bredwa-Mensah (2002) utilized archaeological, archival and ethnographic data to explicate aspects of ethnicity, gender roles, dietary patterns and others on Danish plantations on the Gold Coast during the nineteenth century. The crops that were grown were coffee, citrus, tobacco, sugar cane, and guava. The slaves who provided the labour on Frederiksgave plantation lived in a slave quarters called Dwaben (but no ruins were identified) where extensive excavations took place. Archaeological materials were not different from the Bibiase plantation. Excavations conducted at the Bibiase and Frederiksgave plantations by Bredwa-Mensah (1996a, 2002) seemed extensive in comparative terms, nonetheless the main theme of the excavations, *slave life ways,* seems to have been expressed in warm terms, creating the impression the slaves lived and worked in rosy conditions. The suggestion that because perennial crops were cultivated on the Bibiase plantation, the slaves provided occasional labour can hardly be established unequivocally.

It has been known that maize, which is an annual crop, was grown on almost every plantation as a subsistence staple. If maize was grown together with the perennial crops each of which had different maturation and harvesting time, it stands to reason that the slaves had a busy schedule. This runs contrary to the assertion that the slaves at Bibiase enjoyed some moderate amount of free time (Bredwa-Mensah1996a, p. 455). Frederiskgave plantation also had a wide array of crops that were grown: coffee, citrus, tobacco, sugar cane, guava, cassava, lemon, banana, and plantain. After planting, the slaves were also required to clear the weeds in the farm, and harvest all these crops. According to Norregard (1966, p. 44), other duties of the enslaved workers included smoke-drying coffee beans and transporting the farm produce by head porterage to the Coast in Accra and bringing back provisions such as salt, fish, and other trade goods to the plantations. It is most likely the slaves were not spared the kind of leisure Bredwa-Mensah (2002, 2004) seems to have suggested. Slaves at Frederiksgave plant also could

not have spent their free time fishing since Frederiksgave area has no nearby rivers whose waters swarmed with fish as has been described by Bredwa-Mensah (2004, p. 220). Moreover, the farming implements such as hoe blades and machetes reported by Bredwa-Mensah (2004, p. 217) from Frederiksgave plantation seem to be similar to those being used today. The entire Frederikgave plantation area has been a scene of continuous farming activities by local farmers using similar hoes and machetes. It is therefore possible that those farm implements were used and discarded by local farmers who occupied and were consistently farming at the site after the collapse of the plantation.

In spite of the fact that Bredwa-Mensah's explanations about the issues of plantation life of enslaved Africans are to an extent lopsided, he presents the most comprehensive archaeological excavations of former Danish plantations in Ghana. The excavations and subsequent restoration of the Frederiksgave plantation house as a memory center are all too commendable.

Brockman plantation (Boachie-Ansah 2007)

Excavations conducted by Boachie-Ansah (2007) reported in Excavations *at a Danish plantation site at Brockman, Ghana,* were another attempt to understand the Danish plantation agriculture on the Gold Coast. In recounting the early periods of Brockman plantation, Boachie-Ansah (2007b) states that the Brockman plantation was originally established by one Danish merchant known as C. P. Palm, but Governor Niel Brock bought it in 1833 during his third term as a governor on the Gold Coast. Brockman was located on the hilltop of Seseme village and in close proximity to the Frederiksgave plantation. Coffee and maize were mostly planted on this plantation. About eight enslaved Africans who were attached to the forts in Accra were brought to Brockman plantation to work as slaves. Boachie-Ansah (2007b, p. 541) also makes mention of slave quarters where the African slaves resided as part of the Brockman plantation set-up. However, archaeological investigations as well as walk survey conducted at Brockman in 2002 could not identify the slave quarters. Finds from the excavations comprised locally-manufactured and European glazed pottery, bottles, building construction hardware, farming tools, enamel bowls, cooking utensils, dress-related artefacts, iron traps and gun parts, bones of bovids and shells of molluscs and land snails. The datable materials were assigned to the late nineteenth century to the early twentieth century (Boachie-Ansah (2007b, p. 558).

Though Boachie-Ansah's work at hilltop Brockman plantation constitutes one of the few archaeological attempts to study the Danish plantation system in Ghana, it could be seen to be contributing little to the understanding of the Danish plantation system and plantation life at Brockman. Apart from stating that there were slave quarters attached to the plantation, virtually nothing is heard again about the slave workforce who were an integral part of the entire Danish plantation system. Again, no single artefact is seen as representing the presence of enslaved Africans on the plantation. Boachie-Ansah alluded to the fact that the excavated materials neither relate to Governor Brock (the plantation owner) nor the period that the plantation existed (1833). The materials, according to Boachie-Ansah, belong to the late nineteenth century onwards and are not related to the period around 1833 when Governor Niel Brock is said to have bought the plantation. If that is the case then the materials do not belong to the Danish plantation period.

The materials may best belong to the post-1850 when the English took over all Danish possessions in Ghana. This presents a challenge to the understanding of Danish plantation life at Brockman. That notwithstanding, Brockman material culture throws light on a trend I have observed with the Frederikssted artefacts. It has also been observed that since the enslaved African workers did not live in the same Brockman plantation building with the European planter(s), typical local materials such as local pottery, farming tools (machetes and hoes), and iron traps were mostly used by local people who appropriated the site for accommodation. This has made Brockman plantation fall within the hypothesis that former slave plantation buildings were reoccupied (after they were shut) by some local free (unslaved) people whose material culture should be clearly delineated from materials that belong to the plantation/slavery era. Boachie-Ansah, however, concludes on a commendable note that further archaeological works at Brockman may be necessary so as to shed more light on the actual period that the plantation existed and possibly the life of the enslaved Africans.

1.9 The Study Area

Dodowa is located in, and is the capital of Shai Osudoku District (formerly Dangme West) in the Greater Accra Region of Ghana. According to the 2010 Population and Housing Census, the population of Dodowa is 12,070, covering an area of about 5km² (Ghana Statistical Service 2014, p. 84).

Located about 30 km northeast of the city of Accra (5°53'N 0°7'E), the town is situated in the foothills of the Akuapem Mountains that are characterised by sandstone rock formations and rise about 450 meters above sea level (Kesse 1985, p. 10). Dodowa is located between two contrasting local reliefs.

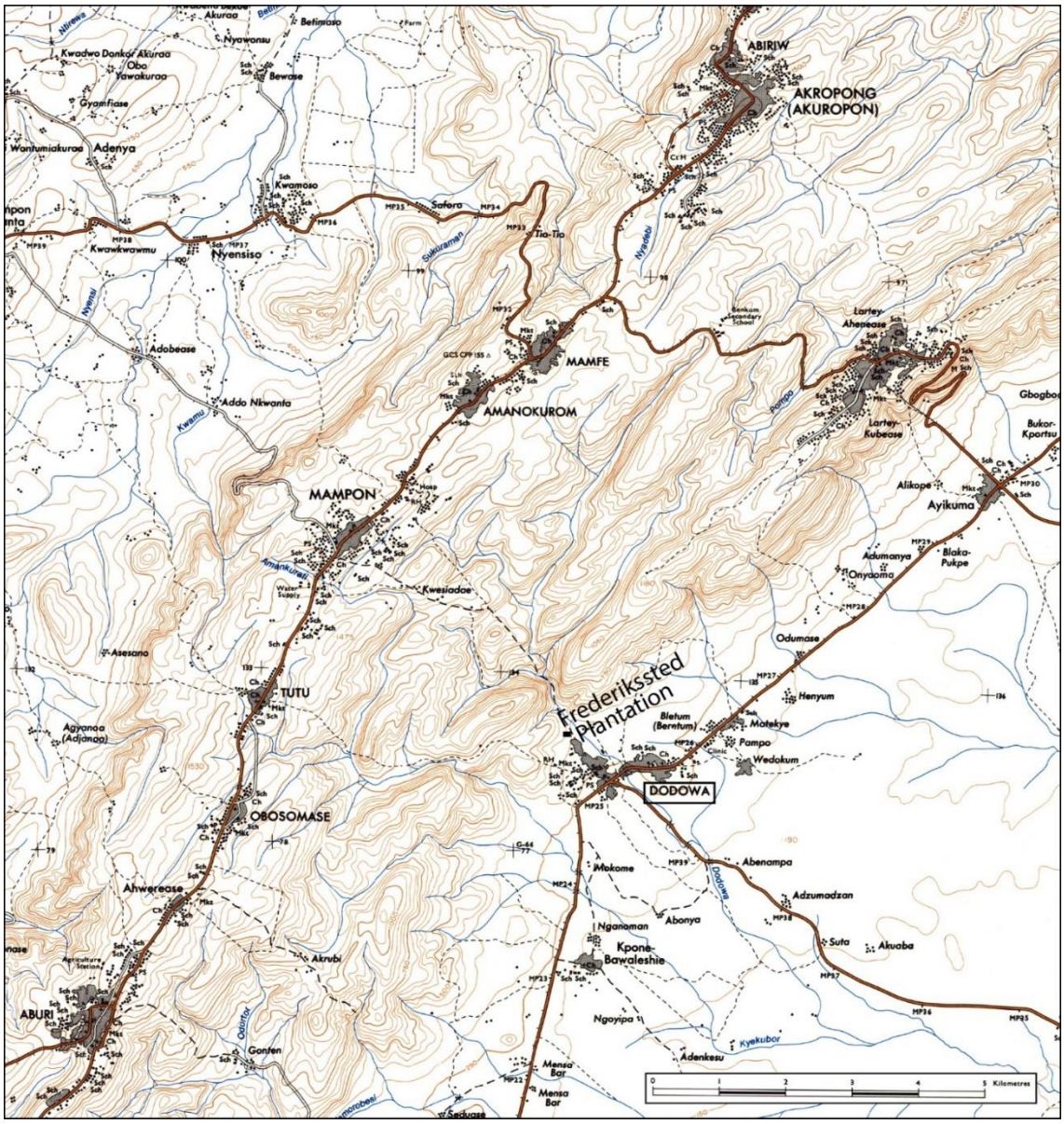

Figure 1.2: Topographical map of the study area

The area to the south contrasts markedly with the area to the north. The immediate southern stretch falls within the Accra plains characterised by low-lying landscape and coastal savannah ecology, whilst the northern section is circumscribed by undulating topography of the Akuapem ranges with a relatively lusher tropical rainforest vegetation, which supports agricultural activities. Frederikssted plantation is located about a

kilometre (from Lower Dodowa) north of the forest ecology of the Dodowa valley, where the historic footpath and the Dodowa River can also be found.

There are no significant historical studies about Dodowa as a single settlement, therefore, much of the historical data used here were obtained through oral interviews I conducted in Lower Dodowa during the fieldwork in 2015. However, some of the documentary information may exist in Danish archives but have not yet been explored. The indigenous people of Dodowa belong to the Shai/Sɛ ethnolinguistic group, and are part of the larger Dangme family of languages. The settlement history of this Shai/Sɛ ethnic group in Dodowa dates to 1892 when the British colonial authorities expelled them from their original settlement area in Shai Hills about 20km from present day Dodowa (Anquandah 1993, p. 646). They eventually formed communities in their farmsteads on the Accra plains, which stretch north to the base of the Akuapem Mountains including Dodowa. Before the arrival of Shai people in 1892, the Dodowa settlement was much limited to Lower Dodowa where some Akuapem people were already living. The population of the new arrivals thus overwhelmed the original Akuapem inhabitants. However, much of the contemporary Lower Dodowa today is occupied by people of Akuapem descent. This implies that between 1802 and 1892 Dodowa was much populated by Akuapem people, some of whom established merchandise outlets in Lower Dodowa. Some may have reoccupied the Frederikssted plantation site during the post-plantation period beginning from 1802 when Frederikssted plantation was closed.

1.10 Thesis Organisation

Apart from this background information, which constitutes Chapter 1, there are 7 more chapters which are summarised in this section. Chapter 2 describes the theoretical background of the thesis. This involves three related theoretical frameworks: the *Historical Archaeology*, *Plantation Economy Theory* and *Culture Contact* models. These combine to shed light on the Danish plantation economy in the gold Coast. The arrival of the Danish colonials created cross-cultural contact situations between the indigenous people and the Europeans. This has created a situation where European culture was seen as coming in contact with indigenous cultures, which archaeologists have studied under the broad topic of historical archaeology. The plantation economy theory was believed to be the historical antecedents of modern Multi-National Corporations, the theory says that modern MLCs are based on the way plantation economies were run. In effect, these

corporations are seen as the twenty-first century versions of plantation economy. Multi-National Corporations have been modelled after the plantation economy theory which involves controlling all the working capital, repatriating profit and limiting domestic linkages, the same way as the plantations operated. The Danish plantation system therefore has not been seen as promoting African production but rather promoting European production in Africa.

Chapter 3 discusses the historical background to plantation agriculture in the Gold Coast. It examines both legitimate trade and slave trade in West Africa during the latter part of the eighteenth century. The legitimate trade to a large extent comprised the provisions trade which supplied provisions to the trans-Atlantic slave ships. The agitations of the abolitionist movements were part of the main factors that compelled the Danish colonial administration to adopt plantation agriculture, which subsequently led to the establishment of a number of plantations in the Gold Coast.

Chapter 4 discusses plantation archaeology in the New World. The main focus is on the archaeological evidence related to the enslaved Africans who were transported to work in the New World plantations. The chapter explores the historical experiences of enslaved African-Americans in the New World plantations such as those in the Caribbean, North America, and South America. It discusses slave food ways, brutality against slaves and resistance to it, slave housing and material culture as well as slave religion. It provides insights into the variability of slave plantations and slave life throughout the New World and further sheds light on how African slave plantations compare with the New World plantations.

Chapter 5 describes the methods of research used to collect and analyse the data for this thesis. In this research, I employed three interconnected archaeological research methods. These include surveys, excavations, and oral traditions. The survey carried out in the Dodowa Valley region revealed many aspects of the natural and cultural landscapes that played out during the era of the Danes in the eighteenth and nineteenth centuries. Data from the excavations also throw more light on the various occupational phases of the Frederikssted plantation area. The oral historical accounts collected from Lower Dodowa were useful for understanding the post plantation commercial activities in Dodowa.

Chapter 6 discuss the material inventory from the Frederikssted excavations. The materials comprise European imported goods as well as local materials manufactured on site acquired from nearby communities. The chapter discusses their historical backgrounds, their techniques of manufacture, and their possible primary and secondary uses. These materials were used and discarded by the various occupants who lived on the Frederikssted plantation site at different times.

Chapter 7 consists of two sections. The first section focuses on the interpretation of the materials retrieved from the excavations and the interpretation of the Frederikssted plantation site. The archaeological data reveal the various occupational phases which include the plantation phase (occupied by the Danish planters and their slaves), the post-plantation phase in the nineteenth century (occupied by a local elite family), and the post-plantation phase in the twentieth century (also occupied by local people). The Frederikssted artefacts further show the impacts of European artistic traditions, international trade, industrial development, elite expenditure, ceremonial traditions, manufacturing technology, consumption patterns, gender relations and cultural contact. The second section comprises a discussion of the impact of the Danish plantation economy in Dodowa. This reveals that the presence of the Danes in Dodowa led to the development of Lower Dodowa, a famous commercial centre during the nineteenth and the twentieth centuries.

The final chapter (Chapter 8) is the synthesis of the material and nonmaterial data discussed in the thesis. The conclusions consider the significant contribution that this research makes to plantation archaeology in Ghana and other parts of the world.

Chapter 2

Theoretical Orientation

2.1 Introduction

This thesis combines three theoretical frameworks: the *Historical Archaeology*, *Plantation Economy Theory* and *Culture Contact* models. The integration of the three concepts represents an interface of common concern. The Danish plantation economy in West Africa in its wake promoted culture contact between Denmark and the Gold Coast between the eighteenth and nineteenth centuries. More so, it was during the same era that European culture (Portuguese, Dutch, and British) was in contact with the Gold Coast. Culture contact arising out of the Danish colonisation/ plantation economy can be studied under the broad topic of historical archaeology, and as was envisaged by Schuyler (1978, p. 57), this was a case of European culture coming in contact with native culture. It also offers an understanding of how indigenous peoples responded to European contacts and colonization under the system of the plantation economy, and how the outcomes of these encounters influenced cultural developments in colonial and postcolonial contexts. The three concepts offer the means to study the material remains of European plantation owners and enslaved Africans who worked in European owned plantations and who also were poorly represented in written accounts.

2.2 Historical Archaeology

Danish plantation archaeology in Ghana is couched within archaeological studies of European expansion and the slave trade and also found within the remit of historical archaeology as practiced in Africa. Archaeologists in West Africa have generally considered it more convenient to employ various methodologies such as ethnography, documentary sources, and oral-historical accounts to complement the archaeological data. This runs contrary to the Americanist definitions of the sub-discipline which restrict historical archaeology to "archaeology carried out on sites of the historic period" (South 1977, p. 25; Schuyler 1978, p. 27) as well as studies of the cultural remains of literate societies that were capable of recording their own histories (Deetz 1996, p. 5). During the mid-1970s, the combined force of documentary and oral tradition was used to locate Fort

Ruychaver about 64 kilometres up the Ankobra River in the Western Region of Ghana. Fort Ruychaver was the only Dutch trading post ever established in the interior part of the Gold Coast. The fort seemed to have been completely forgotten, however it was 'discovered' in Dutch archives and it was located through oral traditions of the local residents of the area before archaeological excavations were carried out (Posnansky & Van Dantzig 1976).

Other historical archaeology projects carried out in Ghana have largely comprised cataloguing (Lawrence 1963; Van Dantzig 1999) and excavating European trading forts (DeCorse 2001; Boachie-Ansah 2008c), all through the combined use of documentary sources, ethnography, oral traditions and archaeological excavations. A.W. Lawrence's book *Trade Castles and Forts of West Africa* offers a survey of the early European forts (Portuguese, English, Dutch, Danish) from the fifteenth century to the nineteenth century. Lawrence's extensive use of archival sources did not only facilitate his survey, it also enabled him to conduct restoration works on eleven of these colonial fortresses during his tenure as the director of the National Museum and Monuments of Ghana between 1951 and 1957. Christopher DeCorse's book *Archaeology of Elmina* (DeCorse 2001) combines oral accounts, ethnographic data, and extensive archaeological excavations at Elmina castle to unearth the various phases of interactions between the various European colonials (who occupied the Elmina castle at different times) and the local people of Elmina and other local traders.

Apart from the European forts and castles most of the eighteenth and the nineteenth century Danish plantations on the Gold Coast have been located and mapped through archival research and oral tradition from the inhabitants (Jeppesen 1966). Archaeological excavations have also been undertaken in four of these Danish plantations (DeCorse 1993; Bredwa-Mensah 2002, 1996a; Boachie-Ansah 2007b) to complement the non-archaeological sources. Although maritime archaeology is at its early stages in West Africa, a number of underwater archaeology projects (mostly by doctoral research students from America) have been undertaken in Ghana. Notable among them is Gregory Cook's PhD thesis project in Elmina (Cook 2012). Similar projects have also been carried out by Rachel Horlings (Horlings 2011) as well as Andrew Pietruszka (Pietruszka 2011). Documentary sources have been very useful in all these maritime archaeological investigations which have mainly focused on shipwreck sites at Elmina in Ghana.

More recently, Doortmont *et al* (2013) have edited a volume comprising archaeological excavations and historical accounts about the Dutch historical presence in Ghana which began around 1591 and lasted up to 1872. *The Ankobra Gold Route Project* (2013) consists of fourteen papers, which combine historical sources, archaeological, and anthropological data to describe the interaction between the local population and the Dutch, particularly the gold trade along the Ankobra River in the Western Region of the Gold Coast between the sixteenth century and the nineteenth century. This somewhat fulfils the projection made by Posnansky and DeCorse (1996) that historical archaeology in Ghana has a promising future due to the fact that its methodological approach is now all embracing; not merely to describe the presence of Europeans but also to incorporate archaeological sites into the broader historical picture. Consequently, recent historical archaeology researches in Ghana have incorporated varied themes such as the history that people carry in their minds as well as their own personal experiences (suggested by anthropology); the 'official' history (in books and documents); and history dug from the ground (archaeology) (Doortmont *et al* 2013:3; Orser 2004, p. 5).

Historical archaeology has created the opportunity to study not only prominent European persons like kings and queens and the rich and the famous, but also the common indigenous folk and anonymous local people who were also part of those who made the history.

It is apparent that African historical archaeology appropriately integrates the archaeological data, European documentary sources and indigenous oral accounts. This integration challenges the Eurocentric definition of historical archaeology. The African element (oral histories and traditions) in historical archaeology can be used to illustrate the varying nature of the European contacts in Africa; especially, we will be able to better understand the technological, social, and cultural changes within the indigenous African societies during the period of African-European interactions. The study of Danish plantation economy in Ghana is very significant in this regard because it has the potential for integrating the archaeological record with the written records as well as with oral histories and traditions. In this circumstance, we are able to explore not only the European documents and the archaeological data but also oral accounts from the indigenous people in order to understand a variety of themes, such as ethnicity, economic activities, status

differences and gender roles within the various indigenous societies that were part of the Danish plantation system.

2.3 Plantation Economy Theory

The theory of plantation economy was developed as a way of explaining the experiences of societies that were subjected to a European plantation system with an enslaved African labour force (Beckford 1999, p. xxvii). Though this theoretical framework was developed mainly to explain the Caribbean slave plantation system, it can as well be used to elucidate the Danish plantation system in the Gold Coast, since they were driven by the same economic motive. The plantation economy models surmise that plantation slavery and specialization in export of primary commodities have marked the evolution of the societies in which they existed. The plantation economy theorist Lloyd Best hypothesizes, "The legacy of institutions, structures and behaviour patterns of the plantation system are so deeply entrenched that adjustment tends to take place as an adaptation within the bounds of the established framework" (Best 1968, p. 32).

The Caribbean economist Norman Girvan (2002) equated the foreign dominance of most modern economies in the Caribbean to the former slave plantations, and argues that the Multi-National Corporation (MNC) is an institution that exists within the same structure of the plantation economy. He points out that the historic continuity of foreign ownership, terminal stage of production, limited domestic linkages, repatriation of profits, and persistence of the immeasurability of value flows with transfer pricing by MNCs are similar to the former slave plantations. Norman Girvan asserts that the plantation economy continues to reflect the historic legacy with plantation-type enterprises operating in primary, natural resource sectors, such as gold, oil, gas, bauxite, bananas, sugar, and tourism (Girvan 2002, p. 19). This is akin to the Guyanese historian Walter Rodney's concept of the underdevelopment of both Africa and the Caribbean. Rodney's work *How Europe underdeveloped Africa* (Rodney 1973) is a pragmatic study of the relationship between Africa and Western Europe. Thus, Rodney's foremost concern was to note by way of scientific study how in fact Western Europe by way of its imperialist principles toward Africa exploited its people and resources and the main mechanism was the European slave trade which he observed was the roots of African underdevelopment and stagnation.

The collaborative work of Lloyd Best and Kari Polanyi Levitt (Best & Levitt 2009) identified the structural constraints on the growth and transformation of Caribbean economies. They argued that such constrains were a result of the historical legacy of plantation systems, and that in the contemporary Caribbean economy, plantation-type institutions in the form of multinational corporations are still dominant. The plantation economy models of Best and Levitt (2009) together with the work of Beckford ((1972) provide a powerful set of expository tools for explaining the underdevelopment and dependence and dysfunctional behaviour of different agents in contemporary third world economies.

The argument has been advanced by Girvan (2002, p. 17) that the transformed version of the plantation economy are the modern export staples which have essentially replaced the original sugarcane, cotton and coffee sectors. Multinational corporations are the 21st century versions of the plantation economy. Hence, the plantation economy model carries the theme of continuity and change. The continuity of foreign ownership, limited "local content" or domestic linkages, and the repatriation of profits by multinational corporations are similar to slave plantation circumstances controlled by the Europeans in the eighteenth and nineteenth centuries. In the contemporary Ghanaian economy, change is also noticeable. A cursory study of the Ghanaian economy and export industry show the complexity of the contemporary adaptations to divergent trajectories of development propelled by external institutions and internal processes. Though the mining industry, timber, and the recent oil industry in contemporary Ghana do indeed differ widely from the former European plantations, their modes of operation are the same as the original plantations. These export industries are largely controlled by foreign multinational corporations that control all the working capital, repatriate profit and limit domestic linkages just as the plantations operated.

A laconic description of the plantation economy has been offered by Dupuy (1983). The plantations were described as mercantilist establishments of the metropolitan countries of Europe and they signify transfer of the feudal institutions of Medieval Europe to Africa and the Caribbean because of similarities such as large landed estates for agricultural production with a labour force organized and administered by either the planters or landlords who also exercised military and juridical authority (Dupuy1983, p. 238; Bredwa-Mensah 2008, p. 151). The plantations created the conditions for self-sustained

industrialization because of their vertical integration into the metropolitan multinational corporations whose objectives were to commandeer as much of the profits as possible from the colonies while controlling the sources of capital and technology (Dupuy1983, p. 238). The plantations were from their outset highly capitalistic ventures, with the focal intention being production for higher turnover. This determines how the factors of production are combined and their orientation toward export trade. This helped to determine what it produced. The requisites for the establishment of plantations, therefore, were capital investment to acquire the factors of production, such as land, labour, and the necessary equipment to maximize production and profits.

Another essential thing which interests Dupuy (1983) is the politico-legal apparatus to acquire, secure and maintain a subordinated labour force and regulate distribution of the surplus. In the seventeenth and eighteenth centuries, Denmark established colonies in the Guinea Coast and the Caribbean and provided the necessary capital and markets to exploit the colonies. One of the key characteristics of plantation economies is that they were integrated into and were subordinated to a metropolitan economy, and functioned according to the latter's requirements. The plantations were purely overseas complements to the metropolitan economy.

Plantation economies were principally mono-crop economies, producing sugar, cotton, coffee or some other staple crop for export, primarily to their metropolitan centre, while being dependent on that centre for the supply of manufactured and consumer goods, including the needed capital and technology. In addition, the plantations of a particular colony operate more or less as self-sufficient units (Dupuy1983, p. 239).

Class, race, and power on the plantations

The plantation economy school analyses the coincidence of class and race relations in plantation societies (Delle 1999, p. 140) and the basis of opposition, resistance and control. Delle (1998, p. 135) affirms that even among the European plantation managers the issue of class existed. It was always the case that the European population on each plantation was small; there was, however, a distinctive class structure in place that comprised the planter/owner, the overseers and the bookkeepers. Bredwa-Mensah (2004, p. 209 & 2008) elucidates the supremacy of the planters and the subordination of the slaves in the Danish plantations in the Gold Coast. The planters constituted themselves

as the ruling class depending on the financial and material capital invested in the plantations while the subordinate lower class (the slaves) constituted the labour force. The attitudes of the planters towards the slaves were characterized by a mixture of coldness, contempt and fear. The slaves were the African population who also experienced varying degrees of social and economic exclusion on the Danish plantations in Ghana.

An assessment of power relationships in the study of cultural interaction bestows vital insights into agency and actuality to show how lives were actually lived. Anthropologists have invigorated their interest in *power* because it is seen as integral to understanding "how the forces of the world impinge upon the people anthropologists study". In archaeology, the study of power is often described as a dialectical relationship between dominance and resistance (Singleton 1998, p. 179), the examinations of how dominant groups wield power and how subordinate groups also show resistance to such power. In explaining evidence of planter power and slave subordination and resistance in plantation landscapes, planter dominance is the most pronounced. Again, control and domination are also seen in housing and food ways. Planter dominance is most evident in the management of architectural spaces. Planters excluded slave dwellings from the formal landscape and established African slave villages built in vernacular architecture for the slaves (Bredwa-Mensah 2008, p. 136 & 238; Singleton 1998, p. 177) in close proximity to European settlements to facilitate surveillance. In most Danish plantations in the Gold Coast the enslaved were required to provide their own food, thus relieving slaveholders from the burden of having to supply food (Bredwa-Mensah 2008, p. 155). These and other plantation management practices served to underpin planter supremacy and the subordinate position assumed by the enslaved Africans.

Most acts of slave resistance had to be covert because the subordinates feared repressive attacks from planters. This is referred to as *hidden transcripts,* a "critique of the power spoken behind the back of the dominant" Singleton (1998, p. 177; Scott 1990). Slave resistance took many forms from organized insurrections to individual acts of feigning sickness, lying, stealing, insolence, insubordination, or laziness (Bredwa-Mensah 2008; Singleton 1998, p. 177). Archaeological identification of slave resistance will be challenging; however, comparative studies with the Caribbean plantation can offer

insights into the way we can ascertain slave resistance which was also commonplace in the New Word plantations.

Frederikssted and the plantation economy module

Even though the original European plantations are no more, their mode of operations is still reflected in the contemporary Ghanaian export industries such as the mining sector, the timber industry and the recent oil industry. A cursory observation reveals that these industries are controlled by foreign multinational companies with limited "local content" and profits are always repatriated abroad. Such an economic viewpoint underpinned the establishment of the Danish plantations in the eighteenth century. The Frederikssted plantation, just like any other Danish plantation, was established in the light of the plantation economy model discussed above. Federikssted was owned and controlled largely by the Danish politico-economic system in Denmark, because its seed capital was provided by the Danish government. In 1792, Jens Nielsen Flindt, who established Federikssted, was granted a sum from the fund known as "Ad usus publicos" for the purpose of establishing this plantation (Jeppesen 1966, p. 53). This highly integrated and subordinated Frederikssted plantation into the metropolitan economic system of Denmark.

Other features that have been discussed in the plantation economy model are repatriation of capital and limited domestic linkages which were all evident at Frederikssted plantation. The central aim of the Frederikssted plantation was a purely mercantile one which sought to export the raw farm produce from the Gold Coast to Denmark and the plantation was exclusively owned by the Danish government with a distinct division between (slave) labour and management. Nonetheless the Danish political/plantation economy on the Gold Coast in the eighteenth century did not only enslave the Africans, it also compelled the indigenous people to pursue diverse economic strategies, and achieved varying levels of economic wellbeing. Africans ultimately became part of the players in the global economies as a result of their involvement in trading activities that were spearheaded by the Danes. Dramatic economic transformations occurred in West Africa as Europe moved towards the abolition of the slave trade in the nineteenth century. These changes stimulated West African economies and cultures. The Danish enclaves in the Gold Coast which also experienced these changes had their economies transformed in much more significant ways. The Dodowa materials, much of which fall within the

post-abolition period show significant involvement of the local people in the global economic system. The excavated artefacts show that these economic transformations created local elites who consumed European elite material culture during the reoccupation period at Frederikssted plantation site as well as nearby Lower Dodowa.

As a scene of numerous mango plantations, present day Dodowa is to some extent seen as maintaining the tradition of plantation agriculture as was bequeathed by the Danes in the 18th century.

2.4 Culture Contact Model

Culture contact refers to any instance of prolonged, direct exchanges among members of a social unit who have divergent cultural backgrounds (Schortman & Urban 1998, p. 102, Baltali 2007, p.12). Silliman (2005 p.58) defines culture contact as a phenomenon which refers to groups of people coming into or staying in contact for days, years, decades, centuries, or even millennia. In general terms the contact can range from amicable to hostile, extensive to minor, long term to short duration, or ancient to recent, and it may include a variety of elements such as exchange, integration, slavery, colonialism, imperialism, and diaspora.

The symbiosis of Danish imperialism and capitalism together with the attendant establishment of plantations and markets through formal and informal institutions made Danish colonialism global in design and intent. As a consequence of the culture contact that ensued between the Danes and different categories of people such as indigenous Dodowa inhabitants, slaves, and later the English, the local people started responding to European material and nonmaterial culture. When these diverse groups of people were predisposed to interact through the desire to exchange both material and nonmaterial culture, contact situations were created. There was the need to mediate relations with "different" peoples, as well as to establish, maintain, and control territorial borders. This also created the circumstance in which "culture contact" was to be expected (Cusick1998a, p. 4).

An essential focus of social theory concerning studies of culture change in anthropology today is understanding how indigenous peoples responded to European contact and colonialism, and how the outcomes of these encounters influenced cultural developments

in postcolonial milieux (Lightfoot 1995, p. 199; Schortman & Urban 1998, p. 102), in order to identify "foreignness" in both material and non-material culture among the indigenous people.

The European arrival on the West African coast in the late fifteenth century led to economic and cultural interactions that resulted in the partition of Africa into colonies in the late nineteenth century. However, Africa had earlier encounters with "outsiders" in the era preceding the arrival of the Europeans. The dawn of the trans-Saharan trade during the first millennium A.D. introduced materials such as metal goods, cloth, and beads to West Africa from the north, while the forest and savannah supplied gold, salt, and slaves (DeCorse 1998, p. 359). The Danes used European materials such as tobacco pipes, and alcoholic drinks as conduits to perpetuate their imperialism. This was contained in a treaty that Isert, a Danish surgeon and botanist signed with Dangmes to acquire large tracks of land to boost the Danish plantation system in the Gold Coast. For example, in a treaty that Isert, a Danish surgeon and botanist, signed with Dangmes to acquire large tracts of land to boost the Danish plantation system in the Gold Coast, contained the following descriptions: "H.M. grants: To the Kabucee of Krobbo [Krobo, written "Krobbo" is another dialect of the Ga-Dangme language group but sometimes 'Krobo' is used erroneously to refer to the Shai/Sɛ of Dodowa and other Dangme dialects because of their mutual intelligibility], the monthly salary of six (rdl). Two bundles of tobacco, two bottles of brandy, and one half dozen pipes" (Winsnes 2007, p. 33).

In probing culture change in contact situations, it is apt to give consideration to the physical contexts in which such contacts transpired. The physical settings have been universally known as peripheries, frontiers, boundaries, or borderlands. It is only recently that archaeological study about peripheral settings is gaining currency. However, an array of center-periphery models afford useful frameworks to archaeologists for structuring investigations of long-distance economic exchange (Rice1998, p. 44). The sudden awakening of archaeologists' attention to center-periphery relations has been the attempt to apply Wallerstein's (1974, 1980) economic model of a *world system* to a variety of historical situations.

According to Wallerstein's original formulation, the capitalist world system evolved in Europe during the late fifteenth and early sixteenth centuries as the result of changes in labour relations and political organization. His model hypothesizes a string of

interrelating geopolitical entities: core (or core state), periphery, and semi-periphery. In recounting these entities and their functions in a world system, Wallerstein provided a basis for more in-depth examination of the economic role of peripheries. In short, cores or core areas are the nerve centres of political and economic centralization of a world system. Cores have a tendency to be the traditional spotlight of interest for historians and archaeologists. Peripheral areas are identified geographically in terms of distance from the core; economically, they supply the core regions with raw resources and depend on it for services and political decision making. By 1750 the European core was expanding and parts of the coastal areas of Africa had been brought into the economic periphery (DeCorse 1998, p. 363). The occurrence of European artefacts and technological novelty are seen as pointers of change and as markers of European expansion (DeCorse 1998, p. 373).

As a result of lingering exploitation by the core states, peripheries in the capitalist world system are characterized by economic drawbacks and structured inequality (Rice 1998, p. 45). As typical of most contact situations, what ensued between the Danes and the people of Dodowa only reinforced the principle of the *world system* theory and its attendant Dependency Theory which basically posits that the rich get richer and the poor get poorer; "the metropoles tend to develop and the satellites (peripheries) are underdeveloped" (Rice 1998, p. 53). The process of the Danish imperial expansions into West Africa shaped and sustained a lop-sided relationship between the Danes who were politically and economically dominant (core-state or centre) and their far-flung Dodowa periphery.

Culture contact and acculturation

The contact between the Danes/Europeans and the indigenous people in the Gold Coast also led to both intrusive and peaceful acculturation. Acculturation has been defined by different anthropologists in different ways. According to Tivel (2012, p. 98), acculturation is what happens to an entire culture when alien traits diffuse in on a large scale and substantially replace traditional cultural patterns. Barnett (1940, p. 22) also defines acculturation as the loss of traditional life ways and subsequent adoption of Western values and lifeways. Acculturation also involves any change in life ways stemming from continuous direct contact between peoples of different cultures (Redfield

et al. 1936), and acceptance or incorporation of "outside" ideas or technology within a generally persistent way of life (Cusick 1998b, p. 128).

The European contacts in West Africa, which were manifest in their trade, territorial claims, and colonization over the past 500 years, had profound effects on West African cultures (DeCorse 1998, p. 362). An aspect of the material inventory that exemplifies acculturation is the *food-ways* system, a phrase that refers to the interrelated system of food conceptualization, procurement, preservation, preparation, and consumption. An array of new plant and animal species was brought to the Gold Coast, and these are still being used as sources of food.

The European material culture in the form of ceramics, glassware, beads smoking pipes, and metal objects that have been associated with the African occupants at Frederikssted shows a form of culture change conditioned by European-imposed change at Dodowa. Some of these materials have been modified and reused for various personal and domestic functions.

The coffee, cotton and tobacco plants introduced by the Danes in the eighteenth century are still grown in Ghana but to a limited extent. Acculturation is also demonstrable in the built environment, because both colonial and contemporary Dodowa show mixtures of European style and indigenous architecture. Apart from the physical structures, there are some European linguistic forms such as human and place names still in use in present day Ghana. English is still the official language in Ghana, whilst some Portuguese vocabulary has been incorporated into some local languages in Ghana. European religious travellers such as the missionaries also through regular and prolong contacts succeeded in transplanting the European way of worship (Christianity) which is well established in modern Ghana. However, in the face of explicit colonial policies aimed at cultural assimilation and widespread technological innovation in some areas, Africans have never been cultural clones of Europeans because Africans can still interpret their beliefs, rituals, and worldview in non-European terms (DeCorse 1992, pp. 182-183, 1998, p. 365) and material manifestations of ritual behaviour are common in most archaeological inventories. That not withstanding, the culture contact that ensued between Dodowa, the Danes, and other European nations created cultural hybridazation in Dodowa enclave during the nineteenth century. In effect, socio-cultural transformations have been analysed as hybridization process and treated as by-product of colonisation. This often

begins with “encounter” of at least two different etically defined entities (Stockhammer 2012, p.1 &49).

In the view of Dear & Burridge (2005 p.302) cultural hybridisation refers to the production of novel cultural forms and practices through the merging or blending of previously separate cultural elements. In Lower Dodowa, the locals who became affluent imitated and borrowed different forms of European ways of life. They thus consumed different types of European material culture in the form of foodways, clothing, and other domestic utilitarian materials. The presence of the British merchandise company (United African Company, [UAC]) in the nineteenth century most likely led to the introduction of English language which probably became lingua franca among these trading elite in Lower Dodowa. The slate fragments and slate pencils retrieved from nineteenth century occupation level in the excavations attest to the presence of literate local population and most probably the use of English language by these local people some of whom also lived in Lower Dodowa.

Local people imitated the European building styles and therefore built their houses in the style of the European merchandise outlets that operated in Lower Dodowa. These local people who also became merchants just like the European trading companies included warehouses and shops as part of their buildings/houses. Others incorporated stone blocks in the foundations and walls of their housing structures in conformity with the European style and the general built environment in Lower Dodowa. Ackermann (2012, p.12) has argued that culture these days is a hybridised phenomenon because no culture has been left untouched by the global circulation of people, artefacts, and non-material culture. This implies that cultures all over the world exhibit hybridity through the process of borrowing, imitation, and fusion (Ackermann 2012, p.15). The cultural processes that occurred in Dodowa during the nineteenth century represent cultural hybridisation as a result of the quest of the local people to adopt and incorporate European ways of life into the African ways of life. The analyses of the Frederikssted artefacts in Chapter 6 and Chapter 7 show extensive use of European material culture by the indigenous people who also did not abandon their African material culture and the African ways of life.

Chapter 3
Commercial Agriculture and Slave Trade in Atlantic Africa: Historical Perspective

3.1 Introduction

This chapter examines both slave trade and legitimate trade in the context of the Guinea trade. Issues discussed include the Guinea trade, history of European slave plantations in the Gold Coast, the provisions trade in West Africa, and inland slavery in the Gold Coast. The chapter provides the context to understand the circumstances under which slave trading and commercial agriculture thrived in the Gold Coast and West/Atlantic Africa as a whole. In the later parts of the seventeenth century traders in Gold Coast/Ghana shifted focus from dealing in material goods to supplying African slaves, and this led the Director-General of the Dutch WIC to observe in 1705 that 'this Gold Coast has turned into a real Slave Coast' (Van Dantzig 1980, p. 146; Law et al 2013, p. 15). The Slave Coast was further defined to include areas extending from the River Volta to further east, including Togo, Benin, and western Nigeria (Law & Mann 1999, p. 307). The "Slave Coast", as the name connotes, was a major staging area as well as main source of slaves for the trans-Atlantic slave trade between the seventeenth and nineteenth centuries. The three leading slave ports of embarkation for the African slaves in the region were Ouidah (Benin), Lagos in Nigeria and the Gold Coast/Ghana (Law & Mann 1999, p. 307). Through their involvement in the slave trade, the communities of the Slave Coast became an integral part of a wider Atlantic world. The European traders who originated from different nations participated in the slave trade on the Slave Coast and shipped slaves and other exports largely to their own countries' settlements in the Americas (Usman 2008, p. 118), and this European trade in west Africa became known as the Guinea trade.

3.2 Guinea Trade

Guinea is a superseded name that referred to the areas of the West African region that lie laterally to the Gulf of Guinea. European geographers in the eighteenth century used the name "Guinea" broadly to describe West African coastal areas that stretch from the tropical forest areas in the subregion to the Sahel. The Guinea region was one of the prominent locations in sub-Saharan Africa that attracted Europeans' attention for trading

purposes. The Guinea region was further divided into two sub-areas: Lower Guinea and Upper Guinea. Lower Guinea stretches to the eastern portion of West Africa, thus from Ghana, Benin, Togo and the southern part of Nigeria, western Cameroon and Equatorial Guinea (Spanish Guinea). Upper Guinea expands from Côte d'Ivoire to the west of the subregion, and includes areas like Liberia, Sierra Leone, Guinea, Guinea-Bissau (Portuguese Guinea), The Gambia and Senegal.

The Guinea trading companies

The availability of trade goods (gold, ivory, dye-wood, gum, spices, etc.) as well as a cheap labor force (slaves) created a great opportunity for the Guinea trade which brought many advantages to those European nations that were involved in it (Daaku 1970, p. 23). First, it improved European manufacturing, since the Guinea Coast served as a big market center for so many kinds of cotton and woolen textiles manufactured in Europe. Secondly, the improvement extended to the East India trade as many East India traders also profited from trading in the Guinea Coast. These East Indian traders traded goods like sugar, cotton products, indigo, coffee etc. which were sold in Guinea Coast (Winsnes 2000, p. 31). The Guinea trade at its high point gave rise to great wealth and envy between European powers. Each European nation or trading company wanted to eliminate the others and this became a major source of bloody wars on the Guinea Coast, especially on the Gold Coast. The discussion that follow examines a statement by Daaku (1970).

> The Gold Coast, which had been a gold mine both literally and figuratively for the Dutch, now slave mine for virtually the whole of Western Europe. The Swedes, the Danes and the Brandenburgers came for their share and the French occasionally reappeared on the scene (Daaku 1970, p. 15).

The European nations that traded in the Guinea Coast set up their own official mercantile companies to carry out all trading activities on behalf of their respective nations. These European companies monopolized trading and shipping activities in their respective colonies and through official colonial policy prevented individuals from competing with them. These companies were typical enterprises that characterised the mercantilist era during the seventeenth and eighteenth centuries. The Companies were organised almost

the same way as modern limited liability companies. They had a board of directors, and Director General who steered the day-to-day management of the company.

Company	Year established	Origin
1. Portuguese Guinea Company	1482	Portugal
2. The Dutch West Indies Company (WIC)	1621	Holland
3. Swedish Africa Company	1647	Sweden
4. Royal African Company (RAC)	1660	England
5. Danish African Company/West India and Guinea Company	1671	Denmark
The Brandenburg African Company/ Brandenburg-Prussia Company	1682	Brandenburg

Table 3.1: Guinea trading companies from Europe

There were also general meetings which were held periodically during which shareholders could have their say in the companies' affairs. The main responsibilities of these European companies were to send European manufactured goods to Africa and take slaves and other African products to the New World and Europe. They also imported European goods for the consumption of European settlers and traders in Africa who facilitated the activities of these trading companies. Each European nation represented by their respective companies began to specifically refer to the area which they settled as their own Gold Coast (Hargrove 2015, p. 30), just as the whole of Guinea was divided among the various European nations into Portuguese Guinea, French Guinea, Spanish Guinea, British Gold Coast and Danish Guinea, Swedish Guinea and German Guinea (Wesseling 2013).

3.3 Commercial Agriculture and Slave Trade in Atlantic Africa (the Provisions Trade and Legitimate Trade)

In this section, the story of commercial agriculture and slave trading in Africa is situated within the contexts of the history of the West African sub-region. The idea of establishing commercial agriculture in West Africa around the seventeenth century was meant to go hand-in-hand with the trans-Atlantic slave trade. Plantations at the time existed purposely for providing food supplies to slave ships in the Middle Passage en route to the Americas. The provisions trade can be described as forerunner to the type of plantation system that

later assumed the status of replacement to the trans-Atlantic slave trade which began from the late eighteenth century onwards. The provisions trade which was commonplace during the pre-abolition era supplied different kinds of food items and other commodities to ships to feed and sustain their human cargoes. Green (2013) shows records of the sale and the purchase of rice on the Upper Guinea Coast, comprising Senegambia and Sierra Leone. The European enslavers also purchased grains such as millet and maize, and sometimes yam and cassava and also palm oil. Palm oil was used in preparing slaves' food before it became an important industrial raw material in Europe (Law et al 2013, p. 13). Malagueta pepper was also bought for the slaves to consume, because of its perceived medicinal properties, against dysentery. French colonies in West Africa namely Goree and Saint-Louis in Senegal, the port of Ouidah in the modern Republic of Benin, and Luanda in Angola, also produced for sale for the provisioning of slave ships that were transiting there.

Green (2013) also documents that food purchases, particularly rice and grains by slave ships were common at the Upper Guinea Coast during the sixteenth century. He stresses that the people were already used to the production and sale of agricultural surplus because of similar practices during the trans-Saharan trade era. The Cape Verde archipelago, which is located at the crossroads between Atlantic Africa and South America, was a strategic location that conveniently served as an entrpôt for Portuguese trading ships to west and west-central Africa.

Other nations also used the archipelago as an advance base for their slave vessels en route to western Africa. In effect Cape Verde functioned as a plantation colony growing tropical crops and at the same time as a supplier of provisions for many vessels bound for Brazil, the Indian and Pacific Oceans (Brooks 2010, p. 27; Green 2012, p. 95). Seibert (2013) also recounts the unique case of São Tóme where slave labour was used to cultivate sugar plantations. São Tóme, which became a crucial entrpôt for the Atlantic slave trade, therefore experienced a sugar boom in the sixteenth century. This system of slave labour which predated the trans-Atlantic slave trade is also believed to have served as a prototype for later plantation complexes in the Americas (Seibert 2013, p. 63; Philips & Philips 2011, p. 69). Food was thus produced for sale to slave ships and the surplus exported to Portugal. In the view of Carney (2001, 1998, 1993), African domesticated rice (*Oryza glaberrima*) was part of the provisions that slave ships procured, and slaves played a

leading role in its introduction and production on plantations in the Americas. This African rice eventually became a major food staple in the New World.

The entire stretch of the Guinea Coast was conveniently divided by European traders along the lines of special export commodities that were obtained and exported from different parts of the region. This was based on the regional specialization that characterised the Guinea/West Africa coastal enclave. This pertains to the provisions that were supplied to the slave ships, because different areas in West Africa supplied different items to the slave ships that plied their coasts (Eltis 2013, p. 44). This is seen in the various descriptions of West Africa as "Grain or Pepper Coast" (modern Liberia and Sierra Leone), "Ivory Coast" (still called Cote d'lvoire) and "Gold Coast" which is modern Ghana.

"Slave Coast" was a large area that included the Gold Coast/Ghana, modern Togo, Dahomey/Benin and Nigeria. Apart from gold from the Gold Coast, a sizeable amount of corn was supplied from the coastal town of Anomabu which was described as the 'principal granary' (Van Dantzig 1980, p. 116). Benin also supplied commodities such as pepper, ivory, gum, and locally made beads and cloth from the 1480s onwards. The Senegal valley was also prominent in the production of gum, and large amounts of palm oil were exported from Old Calabar (in south-eastern Nigeria) from the 1770s (Lynn 1995, p. 69; Northrup 1976). Similarly Green (2013, p. 94) notes that the inhabitants of Rio Nunes in Upper Guinea were said to have supplied different agricultural produce to slave ships but they did not see themselves as directly connected to the slave trade.

The provision trade became so substantial that it made commercial agriculture in West Africa well established long before 1800. It is clear that the sale of agricultural produce and other commodities to slave ships could not qualify as an alternative to the trans-Atlantic slave trade. Commercial agriculture undertaken by different European nations in Africa was not intended to replace the slave trade. In this sense, the early European commercial agriculture was considered as supplementing the slave trade rather than replacing it. A typical case is what Seibert (2013) describes about São Tóme, which played a dual role as entrepot for trans-Atlantic slave trade as well as producing sugar with slave labour, which in effect complemented the slave trade.

In spite of the fact that the provisions trade was not intended to replace the slave trade it has been seen as a precursor to the development of "legitimate commerce" in West Africa and thus formed the basis for the development of plantation agriculture in the late eighteenth century. Northrup (1976) states that the massive supply of yams at the Bight of Biafra (south eastern Nigeria) to slave ships was closely connected to the later development of palm oil exports in the same region. This prepared the local farmers to engage in 'legitimate' commerce during and after the abolition era. In the same vein the provision trade that served both the trans-Saharan and trans-Atlantic trade epochs in the Senegal valley "laid the ground work" for the growth of groundnut export in the later periods (Searing 2003, p. 193). The Upper Guinea coast, as noted by Carney (2001, 1998; Green 2013), become a prominent centre for rice cultivation and export during and after the abolition of the slave trade. The provisions trade, which largely involved cultivation of the African soil, was cited as credible evidence for the fertility of African soils with potential to develop agriculture which in turn could possibly replace the trans-Atlantic slave trade.

3.4 Inland Slavery: Ashanti and the Northern Territories

Slavery is an age-old institution believed to have originated before, and continued into ancient civilizations, and gained currency in Atlantic Africa between the fifteenth century and the mid-twentieth century (Patterson 1982, p. vii). Slaves are generally defined as people originally acquired by purchase or capture, whose labour is coercively appropriated and who forever remain 'outsiders', beyond their owner's kinship group (Patterson 1982, p. 13). Slaves thus share a special relationship with their masters, and the term 'slavery' is thus the institutionalization of these social relationships between the slave and the owner/master (Watson 1980, p. 8). Slavery has also been defined as a system in which certain persons are owned by others, who control every aspect of their lives, including where they live and the work they do (Lal 1994, p. 1; Philip 1985, p. 1). The issue of forced labour becomes the focal point in matters concerning slavery. The International Labour Organisation (ILO), (1930) aptly defines forced labour as "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily''**.** This suggests that the services of the persons involved in forced labour are not offered voluntarily and as such tantamount to slavery (Kloosterboer 1960, p. 70; Akurang-Parry (2002, p. 31).

In effect, a slave is a human being owned by another person, who is also classified as the property of the owner and forced to work without any form of payment. Internal slavery was being practiced in the Gold Coast region long before Europeans began buying and shipping people across the Atlantic to the New World (Penningroth 2007, p. 1039). The internal slavery in the Gold Coast interior has been described as a necessary pre-condition for the enormity of the trans-Atlantic slave trade. This way, Lovejoy et al (1979, p. 26) argue that servile institutions that existed in African societies prior to the advent of the European trade stimulated the trans-Atlantic slave trade. Otherwise, there would not have been any institutional mechanism to supply slaves to the trans-Atlantic slave traders. The European enslavers therefore depended greatly on the distinctly African internal networks of enslavement and trade for external purposes. The Asante and Mossi sates for example played a major role in trafficking and engaging slaves in their respective areas.

Although the legal abolition of the slave trade by the British parliament in 1807 led to the decline of the slave trade in the waters of the Gold Coast, it did not ultimately end the overland slave trade and slave holding in the Gold Coast, Ashanti, as well as the Northern Territories. Ashanti, located at the forest belt of central Ghana, was annexed as a separate colony by Britain in 1900-1901 after the Yaa Asantewaa War (Figure 3.1). This happened after the area was earlier occupied by British troops in 1896. Many of the issues related to slavery in the Gold Coast were also prevalent in Ashanti, partly because paid jobs did not exist at the time. Pawning formed an important component of the trans-Atlantic slave trade not only at the Gold Coast but also at the Bight of Benin, the Cameroon, and Gabon. Slave trading and slave raiding became essential components of the traditional economic structures in many areas of the northern regions in the periods preceding their occupation and annexation by the British in 1901-1902.

There are reports of continuous smuggling of slaves from the Northern Territories through far and remote areas of the eastern coastline comprising Dangme and Ewe (ethnic groups) regions, which remained unpatrolled by the British until 1830, when Denmark ceded those areas to the British (Curtin 1969, p. 221; Dumett and Johnson 1988, p. 73). Some of the slave dealers used indirect clandestine means to modify their slave dealing activities, as there were virtually no formal legal sanctions for slaveholders and dealers. Therefore, at the eastern coastline which fell outside the domain of the British, slave export to the New World persisted even long after 1850, and African traditional

(indigenous) slavery already in existence in the Gold Coast also continued with alacrity. Between 1900 and1940 forced or compulsory labour was central in the implementation of colonial economic ventures, such as mining, building of roads and railways, plantation agriculture, and head-porterage (Akurang-Parry 2000, p. 1).

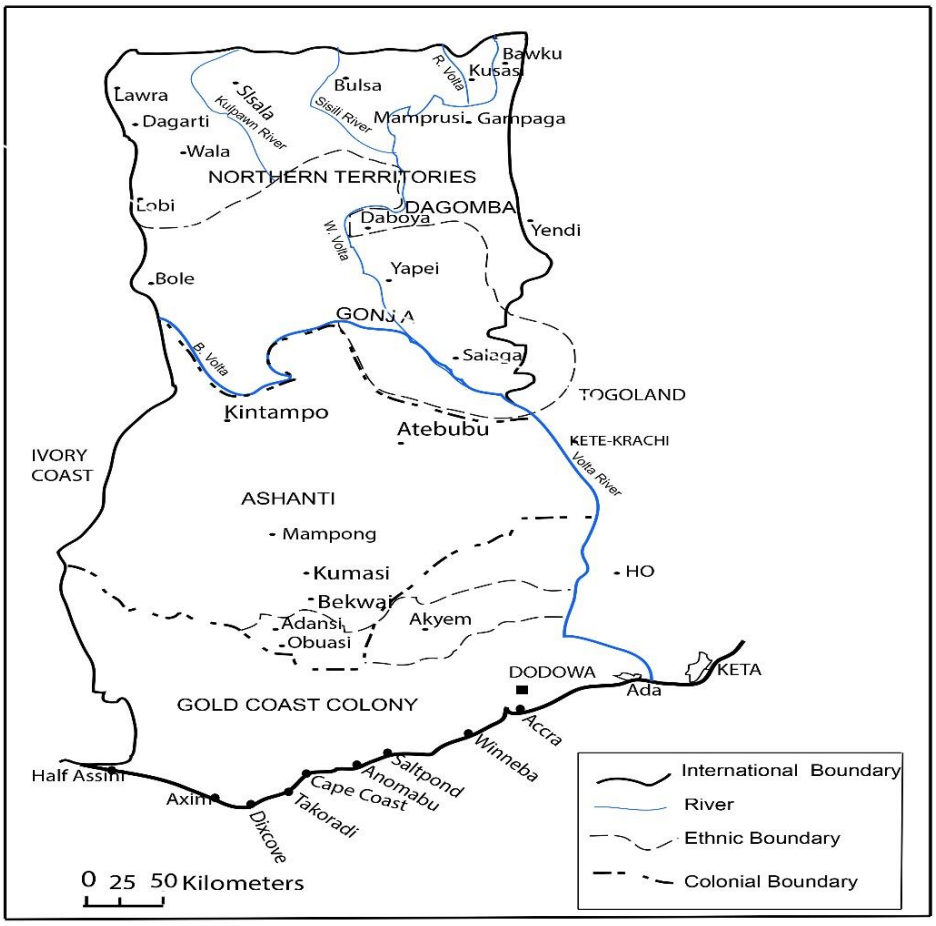

Figure 3.1: Map of colonial Ghana

Abolition of Inland/Indigenous Slavery

In Akan areas, one important factor or method through which slavery was phased down was the internal processes of the slavery itself. This involved the system of assimilation or incorporation of slaves into the host family or lineage (Wilks 1975, p. 36; Rattray 1932, p. 35). This ensured that slavery was not a permanent condition. One of the principal means of incorporating a slave as a fictive kinsman of his/her master's kinship group was intermarriage as males of the "host family" were allowed to take slave girls as wives. Again it also became an unacceptable practice to make reference to someone as a 'slave' in open discourse because such behaviour was seen as ill-mannered and in violation of native customs and morality, and such offenders could be fined in the court of the chief.

These became conciliatory and revolutionary in the attempt to exterminate slavery in most Akan societies. Even up to present times, it is still uncommon in Akan areas for anyone to disclose being a slave descendant because of the fact that the stigma remains.

The prominent exogenous force which propelled the transition from 'slavery' to 'freedom' and the suppression of slavery in the entire Gold Coast was the development of the capitalist economy of which the main agent was the expanding cocoa growing industry of Ashanti and the south-east of the Gold Coast. The railway, mining and European trading firms also offered jobs that the people could depend on rather that dealing in slaves (Dumett and Johnson 1988, p. 108). These notwithstanding, people of slave ancestry were in most cases barred from inheriting from members of the host family. Around the 1880s, the Basel Mission Society also contributed a great deal to the protection of fugitive slaves and to elimination of slavery especially in the south-eastern corridor of the Gold Coast and some areas in Ashanti. In the 1880s, some individual missionaries or the mission itself were reported to have occasionally freed slaves with the aim of converting them to Christianity or turning them into skilled craftsmen or commercial farmers (Dumett and Johnson 1988, p. 78). Regarding legal abolition of the internal slavery in the Gold Coast, two ordinances were gazetted in 1875. They were:

Ordinance no. 1 of 1874: "To Provide for the Abolition of Slave Dealing".
Ordinance no. 2 of 1874: "To Provide for the Emancipation of Persons Holden in Slavery".

The ordinances were meant to mirror the example of the slave emancipation laws in British India but more importantly to supress slave trade and slavery in the northern territories.There is no gainsaying that slavery was firmly established in the Gold Coast and contributed immensely to the trans-Atlantic slave trade. The implementation of the 1874 anti-slavery ordinance presented coercive force, and meted out punishment to alleged slave dealers. The internal factors which pushed slavery to its dead end were seen as conciliatory measures which maintained societal harmony, while the external factors presented alternative sources of income which diverted people's energy from slavery. The amalgamation of these factors has been described by Dumett and Johnson (1988, p. 109) as one of the silent social revolutions that happened to the Gold Coast/Ghana in the late nineteenth and early twentieth centuries.

It is probable that the abolition ordinances may have served as catalyst to free many inland slaves who were held in servitude as pawns, domestic servants, and plantation workers. Some of these former slaves remained in the same domestic settings of their former masters, while others got integrated into the nearby communities. However, it is unclear if former plantation slaves reoccupied the plantation landscapes after the plantations were closed. Regarding the post-plantation occupational phase of Frederikssted plantation, the material culture of the post-plantation phase indicates that after the plantation closed, elite and wealthy local people reoccupied the site rather than the former slaves who worked there. The Frederikssted former slaves most likely became integrated into Dodowa community as free people after Frederikssted closed.

3.5 Danish Plantation Projects on the Gold Coast

It can clearly be seen that the primary interest of the Danes in West Africa was trade, which the monarchy had intended to use revivify the national treasury in the face of a looming economic downturn at the time. Even though the Danes established a long term contact with the Gold Coast from 1658 (when they negotiated for Swedish forts in cape Coast), initial trade contacts with Africa began close to the mid seventeenth century. This is because the first successful voyage by a Danish ship to Guinea is reported to have taken place around 1649 (Norregard 1966:12).

From this voyage and subsequent voyages and trading activities on the Gold Coast, the vast majority of trade items brought by the Danes to West Africa is said to have originated in other European countries (Van Dantzig 1978:239). In fact few European trade items of Danish manufacture have been recovered from archaeological contexts related to Danish occupation in West Africa. Most of the archaeological excavations related to European settlements in Ghana have almost all the time yielded Dutch and English trade goods. Maybe the prices of Danish manufactured goods were often higher than those of the Dutch and English (Daaku 1970; Kea 1970:37). This probably accounts for the discovery of few Danish trading commodities traded on the Gold Coast.

Agriculture attempt by the Bargum's Trading Society

It seems that the first Danish entity to suggest the possibility of plantations in Africa was the Bargum's Trading Society (Boachie-Ansah 2007, p. 358; Nørregård, 1966, p. 120). The Bargum's Trading Society, led by an experienced Danish merchant named Henning

Frederik Bargum, through royal decree took over all Danish trading activities and traffic to the West Indian Islands and the African forts on February 24th 1764. The transfer of the Guinea trade to a private company was a matter of outsourcing Danish trading activities on the Gold Coast in order to reduce the cost of running these activities and raise the necessary revenue to revitalize the Danish treasury. Besides its trading activities the Bargum's Trading Society also conceived the idea of starting plantations and bringing the African soil under cultivation. The initial project was aimed at establishing gardens similar to the ones that occasionally had been laid out near some of the forts, and that were always found outside the English and Dutch strongholds on the Gold Coast (Norregard 1966, p. 173).

In 1765 three Moravian brethren in the persons of Meder, Schultz, and Lemmicke arrived on the Gold Coast and were engaged by Bargum's Trading Society for the purpose of starting the plantations (Nørregård, 1966, p. 120). However, they all died within a short time, and subsequent ones did not survive either. This plantation idea on the part of Bargum's Trading Society came to nothing. It was nonetheless led to claims that apart from the deadly climate, the indigenous people were also accused of being lazy and posed a security threat (Nørregård, 1966, p. 120), thereby contributing to the botched attempt of the plantation idea. It was therefore suggested that the company slaves at the forts were to marry many wives, preferably three or four wives, so as to produce multitudes of children to supply fresh, active and acclimatized labour forces for the plantations after fifteen years. Bargum's Trading Society had failed to establish plantations this time, but Paul Erdman Isert was successful; at least, he put in place the structures for establishing plantations in the Gold Coast.

Paul Erdman Isert and the Frederiksnopel plantation on Gold Coast (1788)

While the Danes arrived in the 17th century and they maintained gardens specifically associated with the forts, the very unique Danish plantations that are the focus of this study date to the end of the 18th and early 19th centuries.

Following the pioneering role they played in abolishing the trans-Atlantic slave trade in 1803, the Danes saw plantation agriculture as an alternative to the abhorrent slave trade**.**

In fact, the practical idea of establishing plantations in the Gold Coast was mooted by Paul Erdman Isert. He was a botanist and a surgeon. He was appointed as chief surgeon to the Danish establishments on the Guinea Coast between 1783 and 1786 (Norregard 1966, p. 173 Winsnes 1992, p. 3). In 1786 he joined a slave ship from the Gold Coast to the West Indies. On the second day at sea, Isert was horror-struck when he witnessed a slave rebellion on the open sea**.** About 452 enslaved blacks who were on the ship rose against the white slave merchants which resulted in death of 34 slaves and 2 of the crew wounded in the heat of the high seas insurrection.

Isert, who already had some foreknowledge about the horror and human misery associated with the activities of slavery and slave trade in the Gold Coast and elsewhere in the Caribbean, came up with an alternative to the repugnant practice of the trans-Atlantic slave trade. To him, the human misery in the slave-processing dungeons of Christiansborg as well as slave ships was against human dignity. He found it inhuman, cruel, and immoral and absurdly stupid. Isert therefore suggested that plantations similar to those of the New World be established in the fertile soils of Africa and use the slave labour to cultivate them. This way the products would be produced cheaply and in so doing prevent the trauma of the Middle Passage and render all facets of slave trade across the Atlantic needless (Norregard 1966, p. 173; Winsnes 1992, p. 4). In a letter sent from Saint Croix in 1787 Isert wrote:

> *Why were our forefathers not sensible enough to establish plantations right there in the fertile continent of Africa; plantations for sugar, coffee, cacao, cotton and other articles that had become so necessary in Europe? "…..if we had come to them with an olive branch in our hand instead of murderous steel, the natives would willingly have given us access to the best and most fertile parts of their lands, areas which for untold years had been lying desolate* (Isert 1992, p. 4; Norregard 1966 , p. 173).

It is clear from the above statement that it was the Middle Passage rather than slavery itself to which Isert objected. Keeping the slaves to work in European plantations in Africa was a better option to him. In the face of heightened abolitionist sentiments in Europe, Isert, who had served for several years as doctor in the Gold Coast, codified all his experiences both in the Gold Coast and in the West Indies (he also witnessed slave

brutalities on Caribbean plantations) into a memoir of his time on the Guinea coast which was published in Copenhagen in 1787. Isert suggested in the memoir that the West Indies plantations could easily be replicated in the tropical climates of West Africa, thereby eliminating any justification for the trans-Atlantic slave trade (Hernæs 2011, p. 83).

The Danish forts had been under the administration of a consortium of slave traders, the so-called Guinea Entrepreneurs, but before the end of 1788, Prince Frederik had consented to an experimental plantation colony with funding coming directly from the Danish crown through the agency of Ernst Schimmelmann (finance minister). The Danish crown provided Isert with a royal licence and conferred military powers on him with the rank of an army captain. Isert additionally received letters of instructions from His Majesty's ministers such as Schimmelmann and Bradt and a grant of 1795 rixdollars from the Ad Publicos Fund as seed money to commence his Guinea plantation. Therefore, in summer the 1788 on board the ship Fredenborg, Isert started his voyage back to the Gold Coast.

In 1788 Paul Isert, representing the Danish Crown, had to negotiate with the then king and leader of Akropong and obtained the land needed to start the plantation. Atiembo, Isert's good friend and his comrade-in-arms, was also a caboceer (local leader and slave merchant) of Akuapem and he assisted Isert to obtain a piece of unused land from the tribal council. Sutton (2015, p. 456) explains that caboceer is a Portuguese word meaning 'head', which evolved to become a title for leading native West Africans who first established trade contacts with the Portuguese. The caboceers learned and became proficient in Portuguese and other European languages. This made them assume prominent status as either rulers in their villages or intermediaries between Europeans and Africans in the trading activities. Caboceer Atiembo assisted Isert to plant tobacco, cotton, and indigo (indigo grew in the wild at the time, and was considered to have great potential for exploitation). Isert is also reported to have received assistance from some African slaves numbering about 19 who had been brought from the forts in Accra, and some Danish craftsmen who accompanied him to the Gold Coast. These people helped to build a house for him and cut an 11km stretch of road through the forest in the direction of Fredenborg. The craftsmen laid out the foundation of the stone house. The initial plan of the settlement was to build a fort and a town encircled with walls (city). This was why he called the settlement Frederiksnopel meaning "Frederik's City". Being satisfied with

the work done at that point, Isert relocated to occupy his new house built on the land (Frederiksnopel plantation) on December 21st 1788.

The plantation economy was also to be diversified to exploiting local palm oil, as oil palm trees were growing and fruiting abundantly in the wild. Indeed, the palm oil trade became a lucrative venture between locals and Europeans even up to the twentieth century with some of the processing centres still extant in the Dodowa Valley. Distillation of alcoholic spirits from maize commonly grown by local farmers was also considered another important source of revenue (Hopkins 2009, p. 802). Immediately after the plantation got underway, Isert sent correspondence to Denmark in which he reiterated with passion about how he had started clearing the land and planting cotton, indigo, tobacco, the seeds of common European garden vegetables, and some local crops. He further requested additional hands of three hundred more colonists to be sent from Denmark to assist him. Unfortunately, Isert did not live to see fruits of his planation. When the plantation got underway with plants growing luxuriantly, Isert visited Christiansborg fort and unfortunately, he died there on the 21st February 1789.

The plantation from there on was to be placed under the control of Jens Flindt, who was one of the Guinea Entrepreneurs as well as slave a trader. Flindt, however, made little progress, as he was entirely uninterested in the project, which eventually led to the collapse of the plantation prematurely. This meant that the most important Danish project on the Guinea coast at the time had failed. Jeppssen (1966) and Hernæs (2013) argue that the most important reason for the failure of Frederiksnopel was its inland location, which entailed serious transportation difficulties. So after his death others did not feel so comfortable to continue. Even though Isert had died and his plantation was unsuccessful, the Danish interest in the West African plantations was still alive; especially, Schimmelmann still thought of West Africa as a potential location for Danish colonial agriculture. Flindt was therefore recalled to Denmark after which he was sent off to Danish West Indies to learn the rudiments of agriculture and methods of plantation cultivation so as to return to West Africa with new skills in cultivation.

Frederikssted plantation

Frederikssted plantation is the focus of this dissertation, I made efforts to locate more detailed documentary information about Frederikssted plantation, however, scanty was

obtained. It may require additional time and funding in later period to access more information either in Ghana or in Danish archives. One of the few documentary of Danish plantations is Jeppesen (1966). According to Jeppesen (1966), Frederikstted plantation was one of the earliest plantations established by the Danes in the hinterland of the southeastern Gold Coast. This plantation was established at Dodowa in 1794 by a Danish slave trader, Jens Neilsen Flindt. Flindt was a former assistant of Isert and was in charge of Frederiksnopel plantation after the death of Isert. Flindt named the plantation Frederikssted (meaning Frederick's settlement) after the Danish Crown Prince Frederick, regent to the Danish monarchy. In 1792, Flindt was granted a sum from the fund "Ad usus publicos" for new plantations, and he started laying out Frederikssted at the town of Dodowa. The crops cultivated on this plantation were mainly cotton and maize.

There were fifteen slaves, ten men and five women who had been brought from the then defunct Frederiksnopel plantation at Akuapem. These 15 slaves were among the 19 slaves who were poorly fed and lived under pitiable conditions at Frederiksnopel. The remaining four were said to be aged and infirm and therefore could not work (Hernæs 2013, p. 177). What happened to them then? There are no accounts as to what happened to these "left over" slaves when Frederiksnopel was closed in 1793. They most probably got integrated into the Akropong community. The 15 slaves who were re-engaged in servitude on Frederikssted plantation provided the labour that cultivated the plantation. Flindt erected three buildings, a grain magazine and a barn as well as a larger dwelling, 70 x 18 feet, on this plantation. Flindt was recalled to Denmark in 1795 at the time he should have been greatly involved in the plantation work and as a result, about 4,730 cotton plants that should have been planted were abandoned. Frederikssted thus fell into disrepair and was abandoned in 1802.

Today, the ruins of the plantation (planters' house) are located in the broad valley of the Dodowa River where archaeological investigations have been carried out to unearth aspects of plantation life during the early stages of the Danish plantation system in Ghana. The plantation house, built with cut stone from the nearby mountain, is believed to have been inhabited by the European planters.

However, the location of the residence of the enslaved Africans who worked on the plantation had not previously been determined. On most plantations, African slave settlements were established in close proximity to the planters' settlements and built in

vernacular architecture, mostly wattle and daub (Bredwa-Mensah 2008, p. 238, 2004; Singleton, 1998, p. 177). Documentary sources as well as archaeological works at the site have not yielded any possible descriptions of the locale of the slave settlement at the Frederikssted plantation, though it was one of the main goals of the archaeological excavations to uncover the remains of place of abode of these early plantation slaves in Ghana.

Challenges of the Danish plantation system

Notwithstanding the zeal that characterised the establishments of the Danish plantations in the Gold Coast, the plantations have been branded as largely unsuccessful. From the outset in 1788 when Isert founded Frederiksnopel, the Danes recorded few gains from the establishment of the plantations due to a number of factors ranging from Asante wars, (DeCorse 1993, p. 155) unfavourable climatic conditions, and poor soils (Awadzi et al, 2002). These factors created financial difficulties for Danish overseas outposts in the Gold Coast. In 1850 all the Danish possessions on the Gold Coast were sold to the British and the Danes left the Gold Coast altogether. This was the time the pages of Danish colonial history on the Gold Coast were closed. The British, after taking possession of the Danish establishments in 1850, abandoned some of the Danish forts, while the functions of others were considerably modified to suit their own needs at that time (DeCorse 1993, p. 157). It was during the era of the British (1850-1957) that all the remaining former Danish plantations collapsed and were abandoned.

3.6 Archaeological Evidence

Accounts of development of the Danish establishments such as trading forts, plantations and other outposts have been extensively surveyed by Lawrence (1963), Van Dantzig (1980), Norregard (1966), Jeppesen (1966), and others (Fage 1959; Golden 1969). Lawrence (1963) and Van Dantzig (1980) have particularly completed comprehensive surveys of the history and architectural development of the European colonial establishments including the Danish forts and outposts while Jeppesen (1966), through the available historical documentary evidence, surveyed all the extant ruins of Danish establishments in the Gold Coast.

Plantation	Date	Archaeological remains
Fredensborg	1736	Few traces remain
Augustaborg	1787	No remains
Insegram	1787	No remains
Frederiksnopel	1788	Foundation remains
Frydenlund	1790	No remains
Jægerslyst	1790	No remains
Bibiase	1791	Ruins still remain
Frederikssted	1794	Ruins still remain
Frederksberg	1796	Tamarind trees still remain
Ejebo	1798	No remains
Kongensteen	1798	Few traces remain
Prindsensteen	1802	Few traces remain
Pompo	1807	Foundation and tamarind trees remain
Daccubie	1808	Few traces remain
Truelsens	1810	No remains
De Forenede Brødre	1825	No remains
Frederiksgave	1831	Restored
Brockman	1833	Foundation still remains

Table 3.2: Danish Plantations

Systematic archaeological excavations that have been carried at four of the former Danish plantation sites include those by DeCorse (1993) at Daccubie plantation , Bredwa-Mensah (2002, 1996a) at Frderiksgave and Bibiase plantations and Boachie-Ansah (2007b) at Brockman plantation. In the long run, the Frederikssted archaeological excavations add to the knowledge about Danish colonial plantations in Ghana. The comprehensive archaeological survey made by Jeppesen (1966) in the 1960s revealed that about 20 plantations with varied sizes and functions were established (See Figure 3.1). Some of the smaller ones were gardens associated with the Danish forts. In some situations simple wooden structures and clay buildings were erected while others had no buildings at all. The large plantations were established at the foothills of the Akuapem Mountains to the north-east of Accra (Figure 3.2).

A number of these plantations were established in the years around 1803, some were privately owned and others were owned by the Danish government (Jeppesen 1966, p. 49).

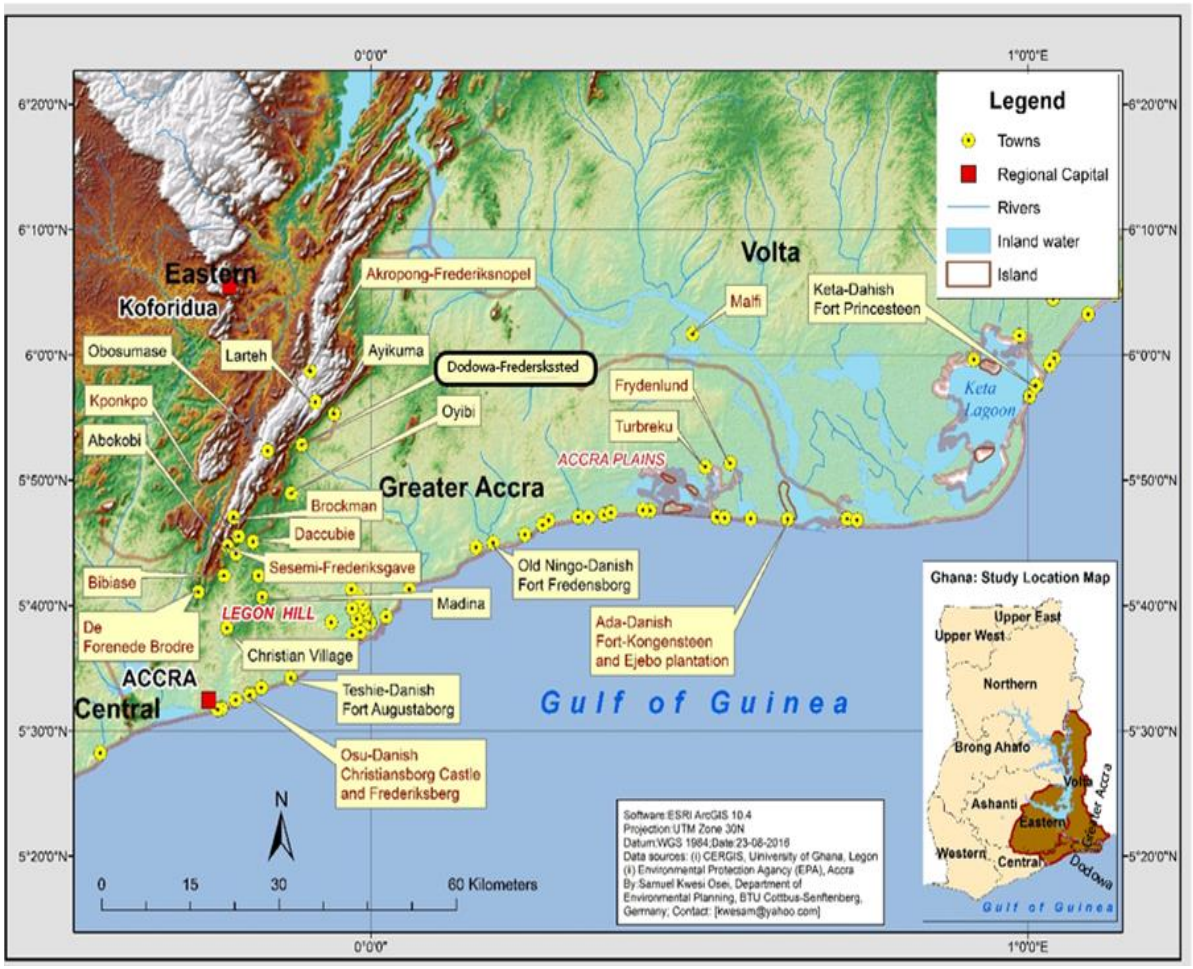

Figure 3.2: Map showing Danish plantations and forts in the Gold Coast (*by Samuel K. Osei)*

Most of the plantations were founded at the foot of the Akwapim Mountains, principally because of the amount of rainfall and particularly its even distribution over the year. The rainfall and the emanating ground water have created a belt of dense vegetation where most of the plantations have been found. Among the plantations are Frederiksnopel, Dacubie, Pompo, Frederiksgave, Frederikstted, Bibiase, and Frederiksberg.

Jeppeson's survey led to the discovery of the traces of buildings at Frederiksnopel, Frederiksberg, Bibiase, Daccubie, Kpompo, De Forenede Brodre and Frederiksgave. Frederikssted plantation in Dodowa however had not been discovered and many had thought it had vanished without any trace. Bibiase, Daccubie and Frederiksnopel can still be seen today and they still have substantial ruins at their various locations, though they are highly endangered due to human activities. Frederiksgave plantation, however, has been restored through the Ghana-Denmark Archaeological (GD-Arch) project. Frederikssted plantation, which is the focus of the thesis, is enjoying some amount of

protection and preservation in the Dodowa valley as attempts are being made to preserve it.

Even though the Danes were the most ambitious European nation to undertake plantation agriculture in West Africa, their colonial/plantation establishments were incomparable to European plantations in the Americas (differences between West African and American plantations have been discussed in detail in Chapter 4). The Danish plantations in West Africa were relatively small in size. More so, the Danish population who represented Denmark's colonial interest in the Gold Coast was said to have consisted of small number of men who were often multi-ethnic, including other Europeans and Africans (DeCorse 1993, p.168). Another significant feature of the Danish colonial activities on the Gold Coast was the observation made by Van Dantzig (1978, p.239) that the Danes brought few (trade) items from Denmark. This implies that the bulk of the trade items that were associated with the Danes in West Africa were obtained from other European countries. This assertion has been confirmed by the Frederikssted archaeological data which produced only one material of Danish origin (Figure 6.23: Royal Copenhagen teacup).

Nineteent Century Transformations

The European incursions into the Atlantic world brought about major changes and transformations in different parts of the Atlantic. Fogleman (2009:8) notes that it was a complex transition, "chronologically irregular, and unsystematic, at times vividly conflicted, at other times quietly disruptive, as social, economic, and political structures shifted into new configurations". In West Africa, both historical and archaeological data have been used to highlight these transformations in the sub-region during the nineteenth century. The West African Coast witnessed a trend towards economic transformations, urbanisation, and social complexity which transformed settlement sizes and patterns as well as political organisations (DeCorse 2015 p.297; DeCorse & Spiers 2009 p.29). During the same period the trans-Atlantic slave trade was still being pursued by the various European slave traders and their agents. In spite of the abolition of the trans-Atlantic slave trade in the early nineteenth century, new ways were still explored to engage West African slaves in European plantations in West Africa. In the wider Atlantic context, the abolition of the slave trade in the nineteenth century decreased the commercial viability of the European trade forts which played pivotal role in European clonial activities in West Africa (DeCorse 2016). Other trading activities such trade in gold, ivory, foodstuffs, and wood was still conducted at the forts, most probably to get

adequate resources to maintain the forts. West African slaves were also redesignated to work in European plantations and as domestic serfs. This is what Tomich, & Zeuske (2008) as well as Tomich, (2004) refer to as the period of the "second slavery". According to Tomich & Zeuske (2008 p.91) the term "second slavery" suggests an analogy with the "second serfdom". It refers to the systemic redeployment and expansion of Atlantic slavery during the nineteenth century. In the view of DeCorse (2015 p.297) the changes that took place during the period of the second slavery were dramatic. It was a period when polities were made and remade as a result of the expanding Atlantic economy during the nineteenth century. It was also a period when enslaved Africans meant for the Americas were retained in Africa to work in European plantations in Africa (second slavery).

The social and economic changes that occurred in the Danish enclave of Dodowa in the nineteenth century are worth noting. The establishment of the Frederikssted plantation by the Danes in Dodowa is seen as a major factor that foregrounded the transformations of this small settlement during the nineteenth century. Three interrelated developments occurred in Dodowa during the nineteenth century. First, there was expansion of the settlement and the demographic pattern of the Dodowa. Second, the Dodowa settlement, particularly, the Lower Dodowa suburb became the nerve centre for trading activities from the nineteenth to the twentieth century. The nineteenth century trading activities in Dodowa have been discussed in detail in Chapter 7. The third development that ensued in Dodowa was acculturation and hybridisation of the indigenous people/cultures as a result of contact with European culture in Lower Dodowa. The Frederikssted archaeological data show evidence of incorporation of the Dodowa settlement into the global/Atlantic economy where the indigenous people became affluent (as a result of trading with the Europeans) and consumed large amount of European material culture. Dodowa, which was previously a small closely-knit community became urban as a result of its position as a famous market centre and increase in its demographic make-up. These developments lay at the heart of the transformations that occurred in Dodowa during the nineteenth century.

Chapter 4

Review of the Archaeology of the New World plantations

4.1 Introduction

This chapter discusses some of the archaeological evidence that provides insights into the nature of slave plantation systems as well as historical experiences of enslaved African-Americans in the New World plantations. Assessment of the material conditions from plantations in Cuba, Jamaica, Brazil, Barbados, the Virgin Islands and North America should provide insight into the variability of slave plantations and slave life throughout the New World and shed light on the interpretations of some of the material culture recovered from Frederikssted excavations.

The choice of the various New World areas in this discussion was based on both geographical and historical considerations. Cuba and Jamaica in particular offer understanding of the Spanish and British slave plantation system in the sixteenth and the seventeenth century respectively. The two Caribbean islands represent in this thesis archaeological researches undertaken in the Larger Antilles by English scholars in the last two decades. Even though Barbados was also a British slave colony in the seventeenth century, it represents archaeological researches carried out in the Lesser Antilles of the Caribbean region. The discussion on plantation slavery in Brazil represents the Portuguese slave plantation system in South America, while the discussion on the USA plantation system also gives evidence of plantation life in the North American continent. As this thesis focuses on Danish plantation systems in Ghana, discussing archaeological researches in the Virgin Islands offers appropriate comparative study of Danish colonial/plantation activities in the two Atlantic areas (Africa and the Caribbean).

The study of the New World slave plantation system has to do with the necessity to study the system of plantation slavery on both sides of the Atlantic world connected by the Middle Passage. This makes international comparative studies more imperative to the thesis instead of making only Atlantic Africa the focus of attention. The chapter therefore explores the nature of the New World slave plantations as well as the African element in the New World, thus life ways of enslaved Africans who lived in the slave communities in the Caribbean, North American, and South American plantations.

In fact, Dodowa plantation archaeology has mixed features. On one hand, it has the features of the New World plantations where slaves and their masters lived and worked under different social conditions. The Dodowa plantation was cultivated by slaves who were extracted from already ailing slave population and worked for 8 years. Their living conditions couldn't have been different from New World plantation slaves. The problem with the Ghana slave plantations is lack of slave material culture in all the excavated Danish plantations. This does not however, suggest that the Ghana/or the Dodowa slave plantation(s) were entirely different from those in the New World. On another hand, the Danish plantations in Ghana were re/occupied by local Africans after the plantations were shut (this may be peculiar to Ghana). However, slave living conditions at Frederikssted most likely were as much deplorable and rebellious as those of the New World. The literature reviewed in this chapter are meant to offer insights into plantation slavery in different parts of the world and throw light on what might be the case in Dodowa during the plantation era.

4.2 Archaeology of Caribbean Plantations and Plantation Life

It has been estimated that about five million enslaved Africans were imported to the Caribbean to work in coffee and sugar plantations (Mount and Randall 1998, p. 22; Curtin 1969, p. 88), leaving numerous archaeological traces in the region. Caribbean plantation archaeology began about three decades ago but initially the research agenda focussed on the reconstruction of only the lifestyles of the 'plantocracy' and 'the plantation'(Agorsah 2011, p. 200) and later Afro-Caribbean slave settlements (Armstrong 1985). This created the tendency to limit archaeological interpretation of the plantations to only one side of the coin, thus the lifestyle of the European plantation owners and their plantations. Archaeological interpretation of the lifestyles of the enslaved African labour force became an important subject of thought in later times as a result of socio-political awareness that was created in the Caribbean. Agorsah (2011) contends that this awareness served to drive the entire Caribbean to assess literature on their African connections in more serious terms than the era before. Caribbean areas discussed in this thesis are Cuba, Jamaica, the Virgin Islands, and Barbados.

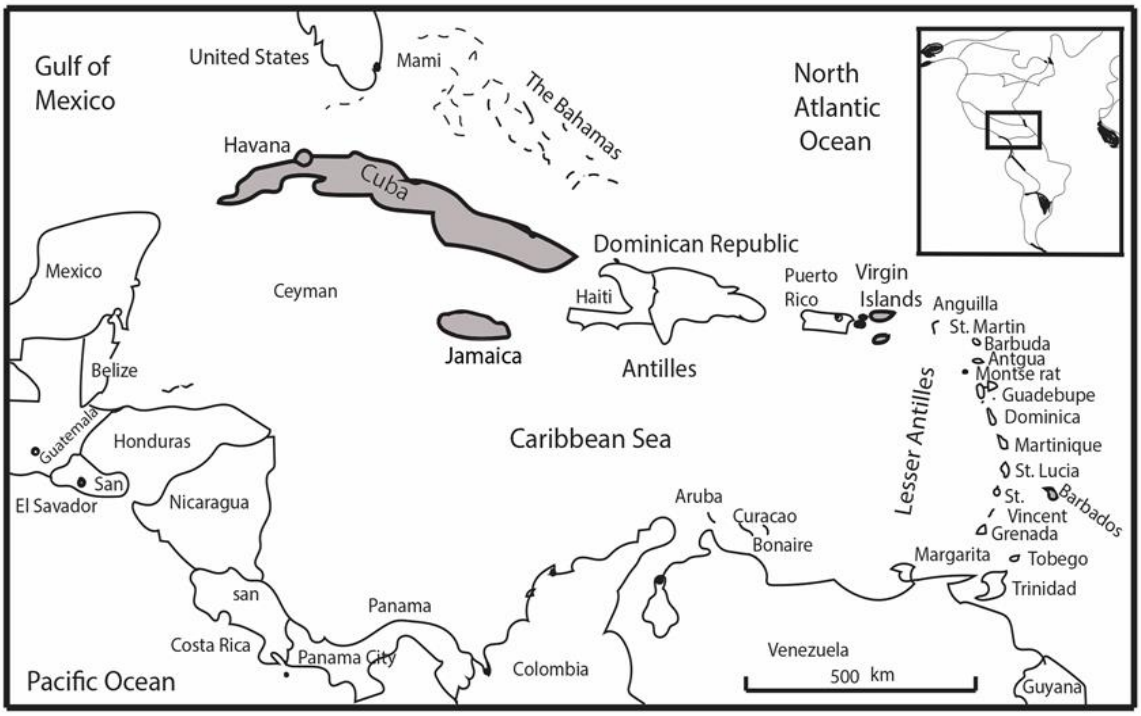

Figure 4.1: Map of the Caribbean with places mentioned in the text

4.3 Cuba

Cuba became a Spanish colony in 1511 (Haines 1996, p. 103; Singleton 2001, p. 98), and is one of the several Caribbean islands that served as final destination for enslaved Africans destined to work in plantations in the New World. Approximately one million Africans were shipped to Cuba, which in the view of Singleton and Souza (2009, p. 450), was more than any other colony of the former Spanish empire. Slavery in Cuba, however, was abolished and made illegal by a royal decree on October 7, 1886 (Rudolph 1987, p. 16). Due to the important place they occupy in Cuban history, former Cuban coffee plantations became the subject of study by archaeologists with the aim of designating them as World Heritage sites (Singleton & Souza 2009, p. 458). Eventually two locations—the valley of sugar plantations in Central Cuba and the first coffee plantations in southeast Cuba —have been studied.

Cuban plantation architecture

Archaeological researches that have been undertaken at Cuban plantations have revealed different forms of extant masonry ruins occupied by the categories of people who worked on the plantations.

Batey (main plantation building): The plantation buildings known as *batey* were the main group of plantation buildings and this includes the great house, outbuildings, and mills. An important characteristic feature of the Cuban coffee plantations was their aesthetic beauty as they were purposefully designed to be the most beautiful of all Cuban plantations. The main buildings (batey) combined neoclassical architecture and beautiful landscape design. The plantation landscape comprised beautiful gardens, guard arrays, orchard, and grand avenues that led to great houses. Coffee plantations could be described as showplaces of grandeur which the slaveholders used for entertainment and attractive destinations for visitors. Santa Ana de Biajacas, for instance, was renowned for its hilltop location; it was described as ‘‘a natural amphitheatre’’ from which the planters also used to have commanding views of the surrounding countryside (Singleton 2015, p. 8).

Slave housing: Architectural remains related to Cuban slave houses have been described under two very broad categories. The first category known as *bohıos,* or small, detached, timber-frame, post-in-hole buildings which were equivalent to slave cabins or huts in North America, had thatched roofs and the walls were made of clay, wood, or reeds. *Bohios* were impermanent structures because they were made from perishable materials and their archaeological investigations require subsurface testing. The second category of the Cuban slave architecture were known as *barracones*, which are usually relatively more permanent masonry buildings of varying sizes and shapes (Singleton 2001; Singleton & Souza 2009).

Recent archaeological excavations conducted by Singleton (2015) at one of the nineteenth century coffee plantations at Santa Ana de Biajacas revealed a number of postholes in which timber posts were erected to supported several *bohios* that served as accommodation units for the enslaved workers. In a recent publication *Slavery behind the wall,* Singleton (2015) describes the slave settlement as located within an enclosure of a huge wall. The entire slave settlement comprised at least 30 clay-walled huts or *bohios* which accommodated a maximum of one hundred enslaved workers. The walling of the Cuban slave settlement was meant to serve both aesthetic and functional purposes. The massive wall enclosure most likely impeded potential runaways and at the same time warded off other slave runaways (intruders) from entering the slave settlement to incite the slaves to rebel. Singleton believes the enclosure also probably served to hide and separate slave houses from public view, since the houses were perceived as repulsive

looking and untidy in appearance as compared to the formal areas of the plantation which were occupied by the planters and the plantation machinery.

Slave material culture and resistance on Cuban plantation

Singleton's work goes beyond description of the built environment of Santa Ana de Biajacas coffee plantation. Excavations at Santa Ana de Biajacas have revealed myriads of utilitarian materials ranging from games, tobacco, alcoholic beverages, personal adornment, and furnishings. Singleton observed that some of these materials such as scrapers made from recycled glass, gaming discs made from recycled ceramics, glass beads imported from Bohemia, and European made ceramics and pipes can also be found in Brazilian and North American slave plantations.

Slave resistance is a significant feature of the Cuban slave plantation system. Around 1882 there was a high rate of runaways and revolts (Scott 1985, p. ix), and in the opinion of Singleton (2015, p. 192), this undermined the authority of the massive wall, the purpose of which was to contain the slaves within. The slaves escaped from the enclosure either permanently or temporarily. Singleton (2015, p. 198) also reports that the slaves also engaged in illegal activities such as raiding of farms, gambling and harbouring other runaway slaves within the enclosure where the slaves lived. The recovery of a number of machetes, which were farm tools but also considered as potential weapons, again suggests how the enslaved workers defied the authority of their masters by concealing them in the settlement in contravention of the norms of the plantation. Singleton (2015) was unable to determine whether the machetes found at Cafetal Biajacas were used as weapons in slave insurrections. But she alluded to the situation where machetes were used as weapons of rebellion and used to murder one José Cantos Valdespino, the owner of Cefetal Empresa in Havana jurisdiction in Cuba (Singleton 2015, p. 193).

Apart from overt forms of resistance (runaways and revolts) there were also covert acts of resistance, such as feigning illness or misplacing tools. Cutting down crops was undoubtedly a more frequent occurrences than overt forms of resistance. Covert acts of resistance in most cases took place undetected by slaveholders and managers of the plantations. According to Scott (1990, p. xii), the process of domination generates a hegemonic public conduct and a backstage discourse entailing what cannot be spoken in the face of power (Singleton 1998, p. 177; Scott 1990, p. xii). The only option for the

slaves was the deployment of *hidden transcripts* to ventilate their pent up feelings about their oppression. The runaway slaves, also known in Spanish as *cimarrones,* sometimes absconded and sought refuge in other plantations for sustenance but the fugitives were never betrayed by their colleagues. They later formed and inhabited their own permanent independent maroon communities in Cuban mountainous areas.

4.4 Jamaica

The major part of Jamaica's socio-political history revolves around the period from the later part of the fifteenth century when the Caribbean island became a Spanish colony to the mid twentieth century when it attained its independence from the British. In 1494 Christopher Columbus in his exploratory journeys arrived at Discovery Bay with the aim of searching for gold, but subsequently claimed the island as a colony for Spain for agricultural purposes. However, in 1655 the British invaded and conquered and possessed Jamaica as a British colony. The conquest of Jamaica in 1655 by the British triggered an influx of many English migrants into Jamaica who then began to use enslaved Africans to cultivate sugar plantations. Jamaica soon became one of the most prominent and productive British sugar colonies and one of the most notorious for extreme brutalities against the enslaved African workers (Leonard 2006, p. 888; Agorsah 2007; Delle1998, p. 169), which resulted in considerable slave revolts, runaways and the development of many maroon communities. Jamaica remained a British colony from 1655 until it attained its independence in 1962. Slavery was outlawed in Jamaica in 1834 after the enactment of the Slavery Abolition Act in 1833 in British Parliament (Higman 1995, p. 4).

The after-effects of the oppressive colonization in Jamaica have variously been expressed in the enslaved workers' attachment to their African heritage and traditions, their resistance to social and economic oppression as well as the development of creole culture in Jamaica and many other areas throughout the New World. Archaeological studies in Jamaica have therefore focused on plantation houses (inhabited by the plantation owners), slave settlements on the plantations and Maroon settlements inhabited by former slaves who fled enslavement to freedom. The discussion of the Jamaican plantations in this thesis focuses on Douglas Armstrong's (1990) interesting and informative archaeological excavations of the Old Village and the Great House at Drax Hall plantation on the northern coast of Jamaica. It can be observed that in Jamaican plantations especially the enslaved workers lived and worked under a brutal slave regime, they interacted and

adjusted, they assimilated but retained their Africaness, they rebelled and received various degrees of punishments, and they escaped to freedom, and left similar material culture in the archaeological record. It is therefore more valid to use the Drax Hall plantation (Armstrong 1990) for broad generalisation of Jamaican slave plantations.

The Drax Hall plantation according to Armstrong (1990), was founded in 1690 by the illustrious Drax family from England and Barbados. It became famous as the largest sugar estate located on the north coast of Jamaica. Drax Hall was also the most consistently owned plantation in Jamaica. It was bought by William Beckford, Lord mayor of London in 1762 and remained in his family until 1821. The Drax Hall plantation incorporated more than three thousand acres of land in its expanse. It extended from the coastal plain to the mountainous landscape of St. Ann's Parish. Drax Hall utilised the service of about 320 slaves to produce sugar, making it the largest and the most successful plantation enterprise in Jamaica in the eighteenth century. In 1795 a school was established and incorporated into Drax Hall plantation. The school, which operated from the St. Ann's Parish courthouse, admitted only European children affiliated with the plantation. The school is now called Jamaica College and is located at Hope Estate, in Kingston. Slaves constituted the basic labour force that worked to produce the necessary cash crop (sugar cane) at Drax Hall plantation where they also lived under coercive controls and constraints established by the plantation managers.

The siting of the slave settlement is one of the essential components of a plantation set-up. Slave settlements have usually been located in close proximity to core areas of work on the plantations and close to the living quarters of the plantation overseers. Notwithstanding the untoward external controls, the slaves usually managed to create their own internal social and cultural system within the slave community (Armstrong 1990). The slave quarters at Drax Hall plantation was founded in the late seventeenth and early eighteenth century with the arrival of more agile *Cromantine* slaves from the Gold Coast. In the settlement, the slave houses were spread out in a clustered arrangement on the limestone hillsides between the plain and the mountains; however, the houses were arranged indiscriminately not conforming to any neat order (Armstrong 1990, p. 87). The houses of the slave village were arranged haphazardly, in conformity to Bryan Edwards's (1973) description of slave housing as places with little regard to order.

Archaeological and historical investigations conducted at Drax Hall by Armstong (1990) include the ruins of old Drax Hall Great House as well as the slave settlement which later became the abode of several free labourers. Douglas Armstrong sought to explore the everyday life of slaves and their overseers which can be observed from the material remains that they left in the ground as refuse, trash and abandoned structures at the plantation's precincts.

Slave material culture and religion

The artefact inventory from the slave settlement comprises a large amount of earthenware materials which provided the basis for chronology as well as indicators for socio-economic status, ethnic identity and subsistence activities of the slaves and free labourers who later occupied the site. The local coarse earthenware bowl and pot forms found at the slave site evolved from African forms and manufacturing techniques as the forms and technology employed in their manufacture were similar to those found in archaeological sites in West Africa. The glass materials and different types of imported ceramics were suggested to have been placed in secondary context due to their reuse by the enslaved workers. Douglas Armstrong (1990, pp. 159-160) suggests the presence of religious activities at the slave quarters. This observation was made through gradual reduction of alcoholic containers. The Christian missionaries who spearheaded the religious activities preached against alcoholism and also campaigned against the institution of slavery. The discovery of artefacts such as glass beads, coins, clay tobacco pipes and agricultural tools and kitchenware like wooden pots, all contributed to the identification of Afro-Jamaican material culture at Drax Hall. Dietary remains recovered from the slaves' residence give the impression of persistent poverty among the slaves, who also in most cases reused European materials and also made use of less expensive local earthenware. However, regarding the material remains, Armstrong (1990, p. 196) reiterates that they reflect both African heritage and adaptive ability that allowed slaves and later free labourers to use available local materials and resources for their own purpose, which eventually created their unique Afro-Jamaican living system and identity.

The artefact assemblage from the Great House suggests great wealth and opulence of the owners of Drax Hall plantation. This is attested to by relatively large quantities of fine glassware fragments, Chinese trade porcelain, architectural remains such as window glass and nails and a host of prestigious materials as compared to material found at the slave

quarters. The archaeological materials retrieved from the Great House represent materials used by all the successive owners of the plantation who used the Great House as their living area.

Violence against slaves at Drax Hall

At Drax Hall Armstrong (1985, 1990) presents direct archaeological evidence of slave punishment and violence in Jamaica. It was in the form of a heavy iron object known as *burden weight*, discovered on the surface close to the plantation village where he describes it as "the single most striking reminder of the restrictive nature of plantation slavery" (Armstrong 1990, p. 193). Slaves were chained to this metallic object and forced to carry it with them. This became the system of social control, which functioned as the usual form of punishment and a harsh reminder of the restrictive and confining system under which the enslaved African workers lived at Drax Hall plantation.

4.5 The Virgin Islands

The Virgin Islands are part of the curving chain of Caribbean islands located between the Atlantic Ocean and the Caribbean Sea. The strategic location of the region in the past made it an important destination of different colonial powers who jostled for prominence in the seventeenth century. The Virgin Islands archipelago consists of three large islands, St. Croix, St. Thomas, and St. John, with forty islets and cays. The region served as a converging point for some of the most important trade routes of Europe and the Americas, and only modernization of shipping has lessened the usefulness of the Virgin Islands as the most convenient midway station (Jarvis 1938, p. 9). The identification of the Virgin Islands came to light in 1493 when Christopher Columbus landed at Salt River during one of his voyages.

The region was already inhabited by aboriginal Carib Indians who met and resisted Columbus and his men in their first encounter at Salt River. Perhaps the initial fierce resistance from the natives put some fear in the Spaniards. However by 1625, the native Indian population had completely disappeared, and the early colonists found uninhabited lands on all three of the islands. The Indians were probably decimated by excessive abuse and new diseases introduced by the European colonials (Jarvis 1938, p. 9; Bastian 2003,

p. 20). Columbus named the islands Las Once Mil Virgines (the 11,000 virgins) in honour of the legend of St. Ursula and her 11,000 martyred virgins (Bastian 2003, p. 20).

Bastian (2003, p. 20) suggested that the lack of native population as source of labour may have compelled the European colonisers to acquire slaves from West Africa to work in the plantations that were established there. This has also been one factor that encouraged the development of the slave trade. The history of the Virgin Islands is believed to have been greatly influenced by its geographical location. One of the most outstanding features of the islands is the physical variation of the islands. They are all characterised by volcanic extrusions. While St. Thomas and St. John are entirely mountainous, St. Croix is generally flat, with hills at only one end of the island. The productive nature of the Virgin Islands became a profound source of wealth to the United States, which acquired them from Denmark in 1917.

Sale of the Virgin Islands to USA

The trade relations that ensued between the United States of America and the Virgin Islands served as the main catalyst that got the USA interested in the islands. During the early part of the nineteenth century, the trading activities intensified as American ships frequently carried very valuable cargoes to and from St. Thomas and St. Croix due to the safe harbours and excellent shipping facilities that the Virgin Islands were endowed with. The people of the Virgin Islands became used to the people of America even more than Denmark. Sometimes during emergency situations they looked toward the United States for protection which distant Denmark could not expeditiously offer (Jarvis 1938, p. 113). Denmark had also suffered economic decline and was on the verge of collapse and for that matter Denmark as colonial owner of the Virgin Islands could neither adequately protect them nor continue to maintain them financially. After annexing Puerto Rico in 1898, thus shortly after the Spanish-American War, the United States in 1902 had begun negotiating a treaty with Demark in which the United States agreed to pay Denmark $5,000,000 for the Danish Virgin Islands. The negotiations were actually concluded on January 17th 1917 which saw Denmark selling the Virgin Islands to the United States for a sum of $25,000,000.

Missionary work

Religion played an important role in the cultural life of the inhabitants of the Virgin Islands. Christian activities became important on the Virgin Islands when the slave numbers soared and the slaves became more difficult to control. It therefore became necessary to find some means of subduing them and teaching them to love slavery and to bear their heavy burdens of slavery with fortitude and without complaining. The troublesome behaviour of the slaves had become a source of worry to the colonists and their home government, so the Danish Crown granted permission to Christian missionaries to visit the Virgin Islands and teach the slaves, who were described as benighted heathens, all about brotherly love and peaceful coexistence in their place of abode (Jarvis 1938, p. 57).

Consequently, attendance at Lutheran service held in Christian's Fort was made compulsory; absence from the service attracted a severe fine. The Moravians played a leading role among the religious entities that worked in the Virgin Islands because they were said to have been more sympathetic and learned of the needs of the slaves. The Danish Crown and the West India Company were thus pleased with the work of the Moravians and encouraged them to do more with the firm belief that the Christian doctrine preached to the slaves would be able to 'sedate' the peevish Africans who had the penchant of rebelling at the least opportunity. As part of their missionary activities, the United Brethren, or Moravians who had begun evangelizing among African slaves in the Danish Virgin Islands also were in St. Croix to preach the gospel to the enslaved people. The Moravians also produced lead-glazed slip-decorated redware pottery as part of their missionary efforts (Lenik 2009, p. 21). Apart from the Moravians, the Lutheran Church also established several Lutheran Churches just as the Jesuit missionaries of the Roman Catholic Church had established themselves in pursuance of evangelisation. The Wesleyan Methodist, and the Protestant Reformed Dutch Church as well as the A.M.E. Zion church also appeared on the scene during the last century all with the aim to Christianise slaves and convert godless men in the Virgin Islands, which was considered a region unreached region by Christianity. These Christian missions became very important and exerted much influence in the cultural life of the Virgin Islands for many years.

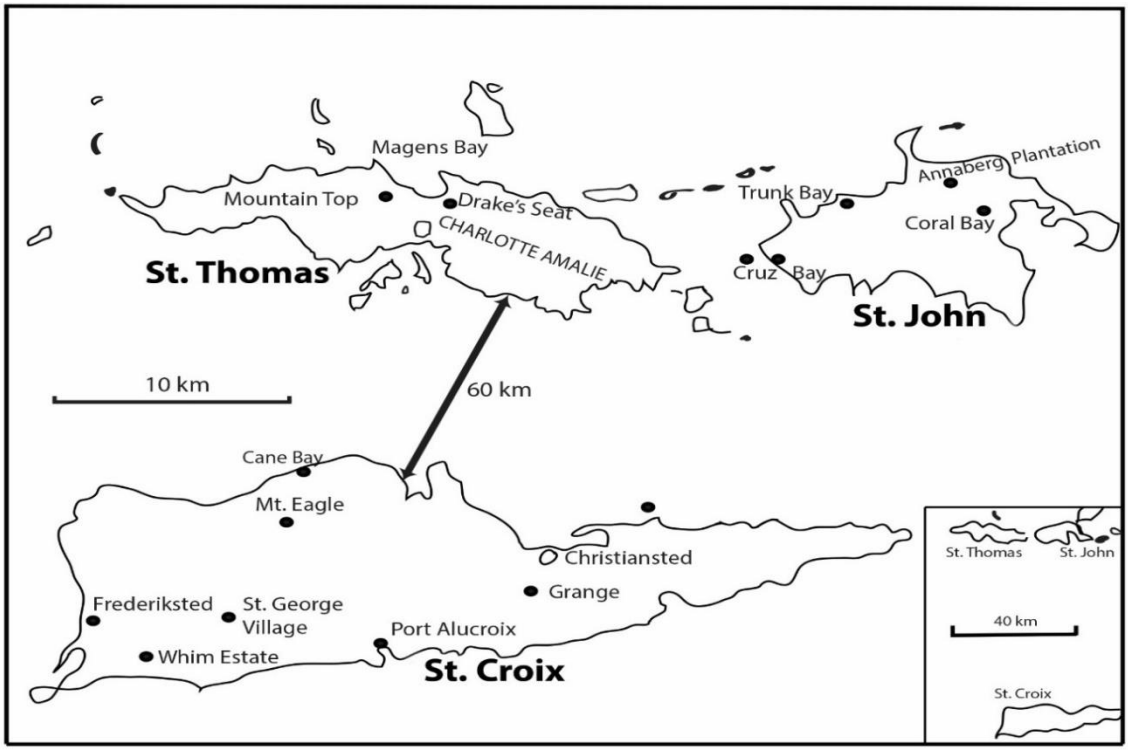

Figure 4.2: Map of US Virgin Islands

Danish occupations of the Virgin Islands

The Danish occupation of the Virgin Islands took place at different times. The Danes first settled in St. Thomas in 1665 but the first colony established there at that time failed due to attacks by both English privateers and devastating diseases. Denmark made a second attempt at colonization in 1672 which was successful. The principal settlement of St. Thomas was known as "Tappus", which is now the city of Charlotte Amalie, the capital the Virgin Islands. The Danish settlement in St. Thomas was sponsored by the Danish West India Company, a commercial venture chartered by the Danish Crown to develop trading areas for Denmark in the West Indies (Jarvis1938, p. 33).

Denmark laid claim to St. John in 1688, when six men were commissioned and given title to land and a grant of money meant to develop plantation/ estates in that island. In 1717, Governor Bredel further sent twenty planters, sixteen slaves and six soldiers to St. John to consolidate the Danish possession of the island. Later a place was earmarked for building of a fort which also incorporated a village, possibly a slave settlement. By 1720, thirty plantations had been laid out, and tax exemptions were granted to the plantation owners for a period of eight years. All of the materials they needed for their dwellings and their sugar mills were also given them for free (Jarvis 1938, p. 12).

The Danish colonials occupied St. Croix beginning from 1733 when the French, who had previously wrestled it from the Spanish, also turned the island over to King Christian of Denmark, which subsequently became a Danish colony until 1917 (Lenik 2009, p. 16). Before St. Croix was purchased by Denmark from France in 1733, it had changed hands many times between different European powers (French, Dutch, and English) who were in competition to increase their possessions and trade routes in the Caribbean. St. Croix is said to be the most productive and largest of the Virgin Islands with the two towns, Frederiksted and Christiansted, having thousands of acres of sugar estates on their soils (Bastian 2003, p. 20).

Virgin Islands slavery

As the Virgin Islands became long-term colonial enclaves of the Danish crown, the usual strategy was to divide up each island into plantations or estates. St. Thomas, St. Croix and St. John all operated their respective plantations with the Danes as the planters/owners. The source of labour was the Danish establishments in the Gold Coast from where slaves were exported into these Danish Caribbean colonies (Virgin Islands) through the Danish West India and Guinea Company. In the account of Jarvis (1938, p. 43), the first batch of slaves from the Gold Coast arrived in the Virgin Islands around 1682. Upon their arrival in their new world, the poor, confused, and disoriented captives had to pass through one kind of hell to another as they were yoked, fastened to their wretched huts, heartlessly beaten up and set to endless work, all aimed at building an empire for the Danish West India and Giunea Company and the king of Denmark. Stringent regulations were set to regulate their conduct in order keep them amenable to the will of their masters. Jarvis (1938 , p. 45) argues that even though most of the slaves were from different ethno-linguistic backgrounds of coastal West Africa, the horror of the voyage from Africa to the West Indies aboard a slave ship coupled with their unremitting labour mixed the groups inextricably which resulted in the formation of Creole culture throughout the West Indies.

As the seasons wore on, the plantation owners grew richer but the slaves became more sullen and restless and weary. Occasionally, there were hurricanes and droughts that brought destruction to the plantations. There were also a series of slave revolts on the Virgin Islands. The most noteworthy is the terrible slave insurrection that took place in St. John on November 13, 1733. The revolt was staged by several thousand blacks, led

by the so-called Amina tribe who had intended to murder all the planters and take possession of the plantations. The whole insurrection was planned in secrecy and carried out in a ruthlessness manner. The slaves hid sharp weapons in the bundles of wood which they usually carried into the fort. They hacked and killed some soldiers stationed at the fort and the violence quickly spread to the entire St. John island. The slaves eventually succeeded in controlling the estates and other valuable things in St. John for some couple of months. The Danes made desperate attempts to recapture it but failed in the first attempt. The Danes had to seek assistance and reinforcement from the French who had established a stronghold at Martinique before the uprising was finally quelled.

Control of slaves in the Virgin Islands (Gardelin Code)

In the Virgin Islands, slaves' behaviour and control were spelt out in the Gardelin Code of 1733. The code was promulgated by the then Governor Philip Gardelin. Under the Gardelin Code, slaves had a set of standard regulations, which defined the types of punishments for the enslaved people for various crimes and offences. Some of the offenses were theft, marronage and practice of indigenous African religion. The punishments, which became institutionalised, comprised amputation, branding with hot irons, flogging, hanging, and castration (Hall 1994, pp. 40&57). The Gardelin Code, however, did not address or mention any welfare concerns (food, clothing, or shelter) of the enslaved workers as the whole code was overshadowed by slave responsibilities without cognisance of their rights and welfare. The Gardelin Code therefore became merely a set of standard regulations, which sought to mete out punishments to enslaved people across the Virgin Islands for over a century. The code was sanctioned as a way of responding to the need for stronger measures to maintain control of the comparatively massive slave population in the Danish West Indies.

Archaeology of the Virgin Islands:

Slave housing and slave settlements on the Virgin Islands: Slave housing and the planters' buildings coexisted as separate design traditions with little or no mutual borrowing. In the submission of Chapman (1991, pp. 109-112), the general trend in slave housing in the Danish West Indies consisted of wattle-and-daub cottages that were roofed with grass or sugarcane leaves, conforming to types found on other Caribbean islands. These slaves' houses were always constructed with four corner poles driven into the ground. The top

ends of the poles were forked to make it possible to receive other horizontal poles on which the rafter and the roof rested. The entire structure was then plastered with mud or lime. The floors were, however, smoothed with beaten earth. There were also instances of slave building characterised by several smaller windows and the door normally was single per house. The origins of pole-in-ground or wattle and daub architecture are most probably traceable to the African slaves as this architectural style is part of the African indigenous building traditions.

Archaeological investigations conducted at a site known as Estate Lower Bethlehem at St. Croix have recovered artefacts related to slave settlement established around the mid-eighteenth century. The slave quarters was situated adjacent to a cemetery and a large tamarind tree (Lenik 2009, p. 12). The identification of a tamarind tree (*Tamarindus indica*) at Estate Bethlehem in St. Croix suggests that the tropical tree is one common material which the Danes used to mark their plantations and their colonial enclaves because a number of tamarind trees can still be seen standing in Danish plantations areas in Ghana. The slave village at Lower Bethlehem is evidenced by the presence of postholes created by wattle and daub architecture, which conforms to the general trend in slave housing in the Caribbean especially Danish Caribbean or the Virgin Islands (Chapman 1991). Artefacts recovered include European ceramics, low-fired earthenware, tiles, tobacco pipe fragments, glass, nails, and ferrous metal fragments.

Recently archaeological investigations conducted at Christiansted National Historic Site in St. Croix have shed light on the Afro-Caribbean descendant community living in St. Croix today (Odewale et al 2017). Christiansted National Historic Site in St. Croix is a former Danish West India and Guinea Company Warehouse. Both Danish soldiers and enslaved Afro-Caribbean peoples resided within the walls of the warehouse and worked in service to the King of Denmark. The enslaved Africans who were also known as 'royal slaves' shared a common social space with the Danish soldiers. The enslaved Africans are known to have been skilled in carpentry, masonry, blacksmithing, seafaring, and other skills that the Danish soldiers depended on for survival (Odewale et al 2017, p. 25). Even though the enslaved Africans lived within the enclosure of the same residential space with the Danish soldiers, archaeological excavations haves revealed that each group was associated with distinctive material culture within the warehouse enclosure. Comparative study of the material culture reveals that the architectural spaces differed between the two

groups. Conch shell floors were uncovered in the rooms of the enslaved people, and in some instances mortar floors with ballast stones laid into the mortar were also common. Other utilitarian artefacts found within the context of enslaved African dwelling spaces were mainly in the form of metal tools and hardware associated with specific industries of the enslaved people. In contrast, the space utilized by the Danish officers/soldiers for storage of goods was decorated with diamond shaped stone tiles, and showed no presence of rough stones and conch shells. According to Odewale et al (2017, p. 40) some of the materials recovered from the Danish soldiers' locale are consistent with the domestic lives of the Danish officers due to the higher amounts of fine ceramics, fragments of large wine bottles, coins, faunal remains, and kaolin clay pipe fragments.

The artefacts recovered from the slaves' quarters suggest an interpretation that life in the warehouse enclosure was challenging given the social environment in St. Croix and the Danish West Indies in general. Apart from the harsh Gardelin slave code of 1733, there was possibly a case of inadequate food supply, diseases and natural disasters, which plagued the slaves' life. This situation is contrary to the historical accounts by Dookhan (1994) that the royal slaves had a better quality of life than those working in the plantations.

Armstrong (2003) details how the people of East End community of St. John, who were described as people of colour whose status had transformed from slavery to freedom, struggled for freedom through community development and skilled maritime work. The history of East End began in the late eighteenth century when a few planters with mixed race settled at St. John peninsula from Virgin Gorda. The East End thus became a diverse community who practised small-holding farming, and at the turn of 1848 (the year slavery was abolished), about 90 percent of the community were recognised as "free coloured" people. In 1916 a severe and destructive hurricane that overran the community led to its abandonment. Armstrong (2003) aimed to identify social change related to adaptations made by the community from slave plantation system to new economic strategies of maritime trade. The archaeological investigations at East End show a general trend of a shift of economic focus from enslaved labour and plantation agriculture to fishing and then later to maritime trade. Armstrong shows how settlement pattern analysis at East End is connected with community development at the various loci surveyed. At all three sites – Windy Hill site, Pleasant Lookout, and Rebecca Fancy–Armstrong shows the

rising influence of maritime trade and there is significant minimization of the dichotomy between planter and slave/servant as the new social and economic environment stimulated household communalism.

Even though Armstrong (2003) shows that the initial plantation society comprised separate living quarters for white planters and black slaves, the differences between them regarding material culture are less pronounced, quite different from other Caribbean plantations. In a way, the inhabitants of East End lived beyond racial differentiation between whites and blacks and the planter and slave relationship. Perhaps the new economic activity of maritime trade was seen as entailing skills and knowhow and was less likely to occasion racial and ethnic distinction than the plantation environment, which involved intensive manual labour. Again, it is most probable that the nature of the data (food related, personal materials, activities, tobacco, tools and trade) that Armstrong examined at East End did not allow him to explore plantation life, as has been the case in the larger Caribbean islands. Moreover, there was little discussion about slavery and plantation life in St. John. This adds to the observation that archaeological investigations in the Virgin Islands are relatively deficient connecting how life was lived on the various estates in contrast to the larger Caribbean contexts of slavery and freedom.

Archaeological examination of walled and terraced house compounds in the Danish colonial port town of Charlotte Amelie in St. Thomas by Armstrong et al (2013) also focused mainly on the dynamics of residential house compounds of two locations: Magens House and the Bankhus house in the vicinity of Government Hill overlooking the warehouses of Charlotte Amalie. The Danish neutrality, free port status and a laissez-faire attitude to trade made St. Thomas's harbour a major trading centre in the late eighteenth century. It must be noted that agricultural production based on slave labour was the dominant economic activity in St. Thomas, especially at the port town of Charlotte Amalie, yet the majority of the inhabitants were free people.

Excavated materials from Magens House and the Bankhus house at St. Thomas revealed ceramic materials that have been described as "Royal Copenhagen fluted lace" (Danish ceramic material which was found at Frederikssted excavations in Dodowa), blue hand-decorated porcelain (also from Denmark), over-glaze porcelain, porcelain, annular wares, stemware, earthenware, and bone button blanks. The material remains from St. Thomas, in the view of Armstrong et al (2013), reflect an upper middle-class assemblage rather

than slaves who worked on plantations. The collection of bone button blanks is also suggestive of a local cottage industry catering to basic needs of the port town.

The archaeological data from St. Thomas compare well with Dodowa materials. Firstly, the Danish colonial policy of neutrality and laissez-faire attitude to trade made St. Thomas's harbour a major trading centre in the late eighteenth century. This is similar to the situation in Lower Dodowa where the Danish plantation economy and trading activities attracted other Europeans (Swiss and British) as well as local merchants which developed Lower Dodowa into a major commercial centre in the nineteenth century. Secondly, it seems the Danish Royal Copenhagen porcelain was an important item that the Danish colonials used in both Dodowa and St. Thomas. It represented Danish nationalistic interests in Danish overseas territories. Thirdly, Armstrong et al (2013) states that artefacts recovered from excavations at Magens House and the Bankhus House at St. Thomas represent upper middle-class assemblage rather than slaves who worked on plantations. This is also true with the nineteenth century post-plantation materials at Frederikssted in Dodowa. These materials reveal the reoccupation of the Frederikssted site by local elite (upper middle class) rather than the former plantation slaves. These similarities probably show a common colonial policy that Denmark promulgated to administer its overseas territories.

Conclusion

It can be observed from the forgoing discussion that the focus of archaeological investigations undertaken in the past ten years in the Virgin Islands stands in contrast to those carried out in Cuba, Jamaica, and Barbados. Whereas emphasis is placed on plantation life manifested in materials associated with planters' lifeways and slave lifeways in Cuba, Jamaica, and Barbados, the Virgin Islands' archaeological investigations have revolved around colonial houses and general trading and maritime trade. However, the archaeological data from the Virgin Islands represent a change of economic focus from plantation economy to maritime commerce as the Danes had the penchant of diversifying their plantation economy in different parts of the world. The Danish political economy in the Virgin Islands compares well with that of the Gold Coast where diverse economic activities were also undertaken to complement the plantation agriculture. Particularly, trading in palm oil and indigo became prominent trading activities in the Gold Coast and later superseded the plantation economy in the 1840s.

The archaeological shift from plantation life to household archaeology (Armstrong et al 2013; Chapman 1991; Odewale et al 2017) and archaeology of maritime trade (Armstrong et al 2009; Armstrong 2003) in the Virgin Islands is perhaps meant to highlight the diversification of the Danish political economy. The Danish colonial settlements in the Virgin Islands were characterised by diversity of nationalities and religions because Danish citizens were unwilling to settle in the West Indies. The laissez – faire approach adopted by Denmark was an effort to attract sufficient population to sustain the Virgin Islands. Denmark then encouraged settlers from a wide range of nationalities to settle in the islands like St. John and St. Croix. People from those settler nations who arrived in the Virgin Islands included Dutch, English, French and Jewish planters, traders, merchants, sailors and craftsmen (Moolenaar 2005) and a large number of Huguenot fugitives who came from St. Kitts (Keller 1902). These multi-national immigrants engaged in diverse economic activities to sustain the economy of the Virgin Islands. There was promotion of religious tolerance, freedom from taxes, land grants and agricultural aid, all meant to entice the new settlers to stay. Archaeologists have therefore been attracted to focus their investigations towards the interpretation of this unusual aspect of Danish colonial settlements in the Caribbean.

4.6 Barbados

Perhaps one area where archaeological investigations have shown clear evidence of slavery and plantation life in the Caribbean is Barbados. Barbados became a classic slave society in the Lesser Antilles during the seventeenth century as its entire economy depended on agricultural production with slave labour. In 1627 when the British colonists made long term settlement in Barbados, they found the island already deserted by the Arawaks who had previously lived there (Schneider 2007, p. 221). By settling in Barbados, the British intended to establish plantations to take advantage of the lucrative sugar industry. By doing so, Barbados became one of the major importers of African slaves to cultivate the Barbadian sugar fields. Even though Barbados is seen as a relatively small island covering an area of a mere 21 miles long and 14 miles wide, it has been described as the wealthiest island in the seventeenth century. In 1650 Barbados had the largest population among all the settlements of English America (Galenson 2002, p. 2; Handler & Corruccini 1983, p. 67; Handler & Lange 1979, p. 45).

The colonisation of Barbados by an English merchant company in 1627 signalled the commencement of the island's integration into the dynamic English commercial world. In respect to this capitalist idea, Barbados was developed as a slave based export oriented agricultural colony, and by 1660 it was generally described as the 'richest spot' in the English empire in the New World on account of the super-profit made by the slave based sugar industry (Beckles 2006, p. xvi). The African slaves and their Creole progeny who constituted the majority of the Barbadian population from the seventeenth century onwards have left behind a rich array of material culture which archaeologists have used to reconstruct the Africaness of Barbadian culture history.

Food and nutrition of Barbadian plantation slaves

In Barbados different research themes have engaged the attention of archaeologists who have conducted archaeological field research in slave sites in plantations on the island. Handler and Corruccini (1983; Handler & Lange 1978) have undertaken physical anthropological studies to examine slave nutrition and health by analysing skeletal and dental materials of slaves at Newton plantation who died and were buried sometime around 1660 to 1820. They used laboratory analysis to describe the general skeletal biology of the slaves, including demographic characteristics, diseases, infections, dental problems, growth and maturation, nutritional crises, and starvation. The analysis also delved into and yielded information on cultural practices such as dental mutilation and tooth extraction, dentistry, pipe smoking, weaning and infant care, and family burial patterns. Some of these practices were African cultural patterns which survived into the New World. The combined use of historical and physical anthropological evidence led Handler and Corruccini (1983) to the conclusion that the slaves were poorly fed and as such were malnourished and became susceptible to diseases. The plantation food allowances and protein ration were said to be woefully minimal. In effect the Barbados slave population was a hungry one. This physical anthropological analysis at Newton slave burial ground, according to Handler and Corruccini (1983, p. 66), provides information that is not available or barely mentioned in historical documents and provides an alternative perspective that counters the ethnocentric biases of the written historical sources.

Slave beliefs/Religion

Handler (1997) further provides archaeological evidence of the sociocultural life of slaves, and shows how some of these African cultural patterns survived and were modified in the New World. Handler (1997a) focuses on one particular burial (Burial 72) on Newton plantation. Handler describes Burial 72 as the richest in the cemetery in terms of the associated items of material culture which were obviously intentionally interred with the dead as grave goods. The burial was believed to contain a dignified and honoured member of the slave community because the associated grave goods clearly distinguish it from all other graves in the cemetery.

Handler (1997a, p. 102) claims that though historical sources on Barbados are silent on whether slaves were buried with grave goods, the archaeological evidence that turned up from Newton plantation burial ground clearly establishes the practice of burying the dead with burial materials. The actual specifics of the content of the *burial 72* included a male adult who was buried (apparently without a coffin) around the late 1600s or early 1700s. His body was placed on an east-west axis with the head facing eastwards. The associated materials which Handler (1997a) describes as 'richest assortment of grave goods' comprised an iron knife, different types of metal jewellery, an earthenware pipe, a necklace of cowries, fish vertebrae, dog canine teeth, European glass beads, and a large carnelian bead probably from India. The conclusion that Handler (1997a) arrived at was that the individual was most likely an African-type diviner/healer whose preeminent status in the slave community is reflected in his elaborate grave goods.

Handler's conclusion is based on the fact that most of the material inventory was quite unusual in the New World. Furthermore, evaluation of ethnographic/ethnohistorical data from West and Central Africa (from where most of the slaves were taken to Barbados) shows that although these regions are characterised by diverse cultures, burying the dead with grave goods was/is common practice. Based on personal observations of burial patterns in some cultures in Ghana, grave goods normally consist of food, drinks (mostly alcoholic), pottery containers, cloth, gold ornaments, beads, cowry shells, rings and bracelets, knives and smoking pipes and some other personal articles that the person cherished in his/her life time.

It appears African socio-cultural influences were quite significant in the life of the Barbadian slave community and that African customs and beliefs influenced the interment of this particular person. The Newton plantation slave cemetery contained unique artefact assemblage that showed strong African influences, which also portrays the early colonial-period slave cemeteries as sites for finding African related material culture as well as exploring the manner in which the creole communities in the New World adopted and adapted European materials to suit their new world.

Slave lifeways and settlement pattern on Barbados plantation

Archaeological and historical research undertaken at Trents plantation in Barbados by Armstrong and Reilly (2014) also aimed at recovering materials that are associated with pre-sugar labourers, including European indentured servants and enslaved Africans. The focus is mainly on how slaves' lives were affected on a Barbadian plantation landscape during the beginning stages of capitalistic modes of production. They explored what they termed two missing elements in British colonial plantation and Diaspora studies in Barbados. The missing elements are the context of pre-sugar small-scale farming and the context of living conditions of the enslaved labourers on seventeenth-century sugar plantations. The Barbados *plantocracy* headed by British planters is distinguished by two phases. The first phase is a pre-sugar era where the initial farms had a mixed production of provisions such as cotton, tobacco, indigo, and potatoes. The labour force at this period comprised indentured workers from Europe and some enslaved Africans. The second phase began in 1643 when there was a switch to commercial production of sugar which brought with it an economic boom to the British plantation owners. The sugar production involved a single site covering an area of 300 acres which dramatically transformed the Trents plantation landscape. This made the initial number of indentured and enslaved labourers incommensurate with the expansion of the plantation landscape. The exponential demand exceeded European labour supplies and the plantation owners turned all the time more to enslaved workers captured from Africa and sold into bondage in the New World. Archaeologists' concern, therefore, has been to assess how these changes affected the nature of labour regimes and impacted upon the lives of the enslaved labourers.

Archaeological remains from Trents plantation demonstrated that the early settlers, comprising plantation owners and labourers, lived and worked together in close

proximity, with very little material or spatial differentiation. Armstrong and Reilly (2014, p. 409) discovered that the deepest archaeological deposits, of the early years of English settlement, produced ornate artefacts, including a Ming-style porcelain rice bowl, stemware and personal adornment items such as belt buckles. Other items retrieved from former slave quarters during the pre-sugar era include domestic earthenware, delftware and locally, regional imported coarse earthenware, tobacco pipes and bottle glass (alcohol and storage bottles). These materials suggest sharing of goods between planters and the indentured workers, perhaps a cordial relationship characterised the early days of Trents plantation. However, the situation changed at the onset of sugar production, coupled with the arrival of a large number of West African slaves. As soon as sugar began to be produced on Trents plantation, the spatial and social organization of the estate was utterly modified. The slaves had to be relocated at a distance relatively far from the planters' residence. The labour force became dominated by enslaved Africans, who were housed in separate settlements away from the planters' mansion, but in close proximity to the core of the industrial estate (mill, factory and canfields).

Armstrong and Reilly (2014) have presented archaeological and spatial data that provide direct evidence of the materials used by settlers during the earliest period. They contend that the living quarters of pre-sugar labourers contain materials that show a mix of activities and social interactions, especially those material objects related to domestic practices and diet. Furthermore, though the estate records show a mix of indentured and enslaved labourers in residence, the data obtained from Trents do not indicate any specific divisions among the labourers. This scenario only paints a picture of cordiality and oneness prior to a period of divisive racial hierarchies that defined social relations between labourers and planters in the later times.

The archaeological data from the post-1640s context on enslaved labourers' settlement indicate that while some of the materials such as the ornate goods were conspicuously absent from slaves' settlement contexts, at the same time they continue to be present in the deposits close to the planters' settlement on the estate. The conclusion was therefore drawn that the slaves/labourers in the early pre-sugar era established warm relationships with other labourers and also interacted regularly with the plantation owners.

The shift to extensive sugar production and the associated relocation of slave settlement at Trents plantations is said to have affected how labourers related to one another. This is

because in the era before the introduction of sugar production, there was cordial interaction between the indentured labourers from Europe and Africa who lived and worked in close proximity to one another. Perhaps these developments provide new understandings into the operations of the later plantation system that came to define other colonial plantations throughout the New World.

Slave resistance in Barbados

The importance of Barbados as a lucrative British sugar colony began to wane by the early eighteenth century. However, until the slave emancipation campaign in 1834-38, the island remained a plantation-slave colony, politically and economically with small numbers of white planters at the helm of affairs. It is worth mentioning that the slave population in Barbados greatly outnumbered the whites and other free persons (Handler 1997b, p. 183). Slave resistance in Barbados, just as other places in the New World, and Danish plantations in Gold Coast, assumed a variety of forms from work stoppages and feigning illness to revolt plots, temporary unauthorized absences, and permanent escapes, lying, stealing, and insolence (Bredwa-Mensah 2008; Handler 1997, p. 183; Singleton 1998, p. 177). Slave flight or maroonage, sometimes not with the intention of permanently escaping the slave system, was another feature of Barbadian slave society as it occurred in most slave societies throughout the Americas (Price 1979, p. 3). However, the population density coupled with the flat landscape of Barbados served as major hindrances to slave runaways and concealment. Nonetheless, some of the slaves managed to flee the island completely and could also directly or indirectly influence, incite or encourage other slaves to rebel and leave their masters. Around the seventeenth century, those who successfully absconded were very difficult to trace, and they were in the habit of planning and undertaking reprisal attacks against white masters and their properties, sometimes emerging from their hideouts to steal food from the plantations (Handler 1997b:184).

It is commonplace that Maroons in Barbados, as well as throughout the New World, directly challenged the system of authority instituted on the plantations; apart from the frequent unauthorized absence from the farms, their absence also reduced the masters' work force, depriving them of their labour, and, in effect, the masters could not exercise maximum control over their own property. The existence of maroons communities was seen by the masters as subverting the plantation social order, undermining authority and

reducing productivity, but to the maroons it was a matter of fleeing from oppression to freedom.

4.7 Brazil

Brazil became attractive to European colonials in the early sixteenth century with Portugal taking full control from 1500 until 1822 when Brazil gained independence from Portugal. During the initial stages Portugal focused on exporting Brazilwood from the Americas to Portugal, and trade in it became a royal monopoly (Elliott 1989, p. 16). Undoubtedly, the institution of slavery left a permanent mark on the Brazilian socio-cultural system. As the Portuguese were already well acquainted with the economic benefits of slavery they quickly resorted to importation of slaves into Brazil (Forman 1975, p. 21). The dominance of Portugal in the transatlantic slave trade in the sixteenth century afforded it the opportunity to buy a considerable number of African slaves for Brazil to be used on their sugarcane plantations. By 1580, the Brazil colony did not only boast of a large black population but also it became the principal supplier of sugar to European markets (Palmer 2000, p. 20). This section briefly reviews some of the archaeological data that provide insights into historical experiences of the African slaves who lived and worked on Portuguese plantations in Brazil.

The African slaves' experiences comprise issues such as everyday plantation life, slave resistance and identity formation. Archaeological investigations conducted at sugar plantations of the Chapada dos Guimaräes region of Western Brazil (Souza & Symanski 2009; Symanski 2012; Singleton & Souza 2009) have given insights about how life was lived by planters, free labourers, and slaves on these plantations. Archaeological research done in two sites, the engenhos (sugar mills) Rio da Casca and Agua Fria, revealed a variety of material culture associated with three basic social groups that lived in these establishments: planters, free labourers, and slaves.

The settlement of engenho of Rio da Casca took place between 1786 and the end of the 19th century. Its archaeological landscape included structures and features spread over an area of 180 x 180 m. Archaeological excavations conducted by Souza and Symanski (2009; Symanski 2012) concentrated on deposits associated with six areas of habitation: the planter's house, the free labourers' house, and four areas associated with the slaves. The other site, engenho of Agua Fria, was also occupied between 1809 and the early

twentieth century, and had 57 slaves who worked on that sugar estate. It was first established by one Domingos da Silva Barreiros, who lived there with his wife, Ana Luiza da Silva, until his death in 1818. The archaeological structures and features on engenho of Agua Fria were distributed over an area of 80 x 140 m. The three loci that were excavated were deposits associated with human habitation. They included the planter's house, a free labourers' house, and a slave cabin.

The number of enslaved workers in the plantations varied between 9 and 100 but the majority of the plantations had between 9 and 40 slave workers. The main tasks of the slaves were to provide manual labour on plantation fields but they could also work as carpenters, ironsmiths, and stonemasons (Symanski 2012, p. 126). In most of the plantations the enslaved workers were subjected to violent and oppressive treatment which resulted in social tensions and conflicts leading to slave runaways and settlement in maroon communities (Orser & Funari 2001, p. 66). The Brazilian plantation settings were characterised by multicultural inhabitants such as Portuguese, Portuguese Brazilians, Africans from different regions of the continent, African Brazilians, and Amerindians. Although these people shared the same physical setting, they also had very distinct cultural backgrounds. However, the slave population was predominantly African and African-descendent, since indigenous slavery had been officially abolished in 1755 (Souza & Symanski 2009, p. 519).

Archaeology at Senzalas/ Brazilian slave housing

Archaeological studies have been conducted at slave settlements on Brazil plantations known as Senzalas with the aim of examining the sociocultural practices of enslaved people under the oppression and subjugation of slavery, as well as identification of their survival strategies through material culture. Excavations have revealed Senzalas as usually consisting of a pavilion and a long building which was subdivided into smaller units, and these were generally found in close proximity to the planters' great house. Most of the Senzalas were wattle-and-daub buildings but occasionally there were a few that had stone walls (Singleton & Souza 2009, p. 455; Souza & Symanski 2009, p. 52). The Senzalas were covered with thatched roofs and were similar to eighteenth and nineteenth century slave houses excavated in South Carolina (Ferguson 1992, p. 63), various regions from the Caribbean (Armstrong 1990; Armstrong & Kelly 2000, pp. 383-384; Singleton 2001, p. 102, and the Gold Coast/Ghana (Bredwa-Mensah 2004, 2008). Singleton and

Souza (2009, p. 456) reveal that the enslaved labourers deliberately used the inner areas of the Senzalas as activity areas; however, they have produced few archaeological artefacts, possibly due to sanitary practices as they kept areas around the Senzalas clean and free of garbage.

Beliefs and religion

According to Souza and Symanski (2009; Symanski 2012), the plantations were organised according to a strict hierarchical model with the planters' house situated at a central location. European-produced goods were distributed among free labourers and slaves, in line with the hierarchical order. Even though the slaves had to live in conformity to the hierarchical system, they were also able to take advantage of opportunities to subvert this space they were allocated and they appropriated it to suit their own traditions and practices. Slaves who worked on Western Brazil plantations, especially at Rio da Casca and Agua Fria plantations (largely African), expressed their African backgrounds by producing low-fired earthenware with sign-values related to their African practices in spite of their perceived low value. A good number of the low-fired earthenware vessels found at Chapada dos Guimaräes plantations were decorated with incised decorative designs reminiscent of sub-Saharan African traditional decorative forms. Gosselain (1999, p. 212) affirms that most African traditional societies associate pottery with human forms. The enslaved Africans on Chapada dos Guimaräes plantations in Brazil made pottery ornamentations that parallel African body scarifications and tattoos. More so, some of the pottery materials had some sections designated after some specific human body parts, and these specific human body parts incised on the vessels may be used to symbolize or define their gender. The pottery ornamentations afforded the enslaved workers a way to place a premium on their African values which often played an important role in asserting their identities and shaping their community consciousness.

Archaeological investigations have also examined artefacts of a religious nature. For instance artefacts such as a *figa*, religious amulet, a coin, the figure of a raising sun, and images of saints, and Jesus Christ have been recovered from excavations conducted in an extant building found in a cemetery that belonged to a mining company in Minas Gerais, where many enslaved labourers were believed to have lived and worked (Singleton & Souza 2009, p. 456). These finds have been interpreted as evidence of African-influenced symbolic and ritual practices. Other varieties of artefacts examined include recycled

glass, clay pipes, and pottery. These objects indicate that the users were low-income groups, possibly enslaved people of African descent. Souza and Agostini (2012, p. 102) have suggested that the enslaved people in Brazil used anthropomorphic and geometric patterns on their pipes to express differences among slave groups and between enslaved people and slaveholders in their study of *Body marks, pots, and pipes in eighteenth and nineteenth-century Brazil*. Aspects related to specific signs carved onto pots and pipes are similar to body scarifications identified with some African tribes. They argued that "these decorations were appropriated, recontextualized, and sometimes resignified by Brazilian slaves, who used them in the construction of new diasporic identities" (Souza and Agostini 2012, p. 102). The evidence of these artefacts is seen as pointing to creation of slave identities, resistance, and the relationship between ethnicity, gender, cultural difference and the ability to shape their own experiences through material culture in the face of racially mixed origin combining white Europeans, Indians, and Africans (Singleton & Souza 2009, p. 456; Souza & Agostini 2012; Symanski 2012, p. 141).

On Chapada dos Guimaräes plantations, the main mode of worship was through the Roman Catholic religion, which was strictly imposed on the enslaved population. Every morning the slaves were coerced to gather for Catholic prayers under the supervision of the plantation overseers. Punishment was meted out to those who failed or refused to attend. However, the compulsory Christianisation of the enslaved people could not entirely alter the core of their African indigenous beliefs. Symanski (2012, p. 140; Souza & Symanski 2009, p. 540) has provided possible evidence in relation to the African indigenous spirituality of the slaves. This is evidenced by discovery of some pottery materials at Chapada dos Guimaraes whose decorative patterns were made by impressing beads (beads are well known spiritual objects in Africa) into the leather hard clay vessel to create series of grooves in the inner surface. More clay objects were also found with encircled cruciform marks incised into the clay object. This insignia is said to be similar to the Bakongo cosmogram, suggesting that the slaves there were of Congo origin who continued to practice their native African religion (Ferguson 1992, p. 116; Symanski 2012, p. 141; Souza & Symanski 2009, p. 539). Other material objects associated with African divination were rock crystals buried in rooms, and an earthenware plate which held a copper coin and was placed in the corner of a room. These may have been magical objects that the enslaved workers applied possibly to bewitch their common enemies: that is the plantation masters.

Symanski (2012, p. 143) reveals that even though the current peasant population of Chapada dos Guimaräes seem to have forgotten about African supernatural entities they still keep certain traditional religious celebrations with African influences. The ability of the enslaved Africans to perform their indigenous religious practices in the Chapada dos Guimaräes plantation indicates symbolic defiance of the planters' imposition of the Catholic religion, or perhaps the planters did not identify these expressions as aiming at subverting their authority.

4.8 USA: Slave Lifeways in North American Plantations

One major component of contemporary historical archaeology in the USA involves investigation of slave sites connected to plantations where people of African descent were enslaved. The archaeological study of slavery in the USA, which is also referred to as African-American archaeology, comprises the use of material culture to interpret African-American life on the slave driven plantations (Singleton 1995, p. 120). The focus of the discussion here involves the archaeological findings recovered from the previous living and work areas of enslaved people (Africans) on North American plantations, particularly in the Southern United States. Indeed, the scope of plantation archaeology in the United States is so vast that it is not possible to evaluate the minute details of all archaeological findings from slave plantations in this thesis. The discussion here instead assesses some of the general trends in plantation archaeology in North America. Archaeological investigations that have been carried out within slave quarters in North America provide original information about the generality of slave life. Archaeologists have generally addressed issues relating to material objects of slaves, slave housing, slave health and diet, belief system/religion, violence against slaves and slave resistance. Some of the general trends will focus on archaeological findings of material culture that reflects African American identity formation and living conditions on various North American plantations.

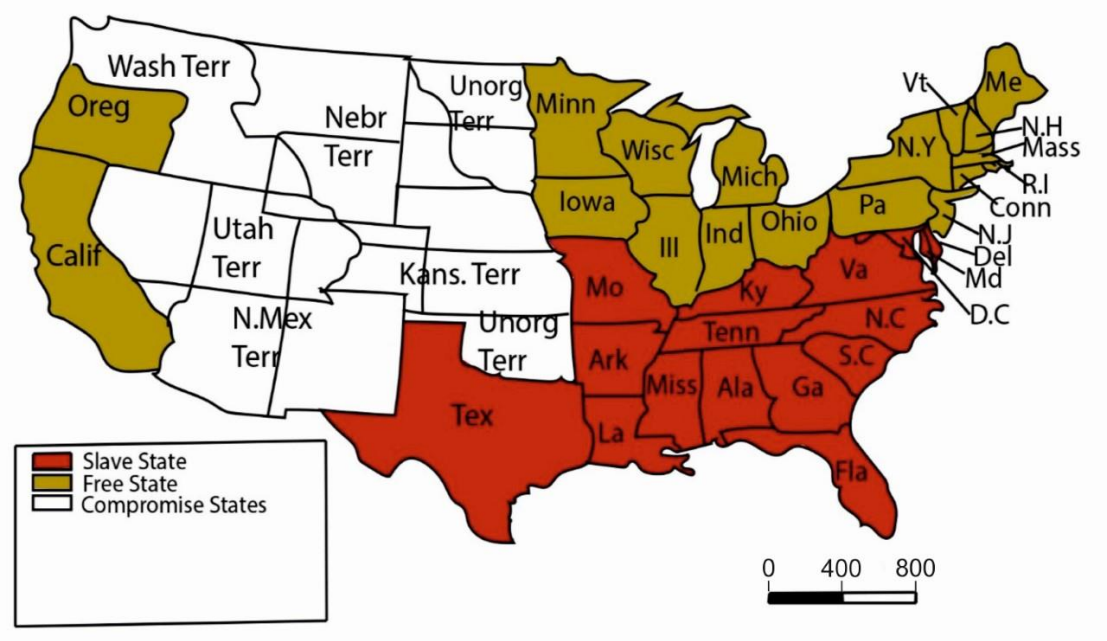

Figure 4.3: United States plantation states in the 1860s

Ferguson (1992, p. xxxvi) recounts that the beginning and growth of African American archaeology has been influenced by several social, political, and intellectual forces. These include African-American activism, the passage of historic preservation legislation, the advent of archaeological interest in North American ethnic groups and the growth of public archaeology especially in the interpretation of historic sites, which also included slave plantations. These factors consequently led Charles Fairbanks in 1967 to conduct archaeological investigations of extant slave cabins on Kingsley Plantation in Duval County, Florida. Fairbanks' work at Kingsley Plantation in Florida constitutes the pioneer archaeological investigations of slave sites in North America. Fairbanks (1984, 1983, 1972) gave a detail description of material culture associated with sites of enslaved African workers, about which little or nothing was known archaeologically before then. The material inventory comprises European ceramics, metals, glass, tobacco pipes and faunal remains. One group of material culture whose discovery at Kingsley plantation was somewhat surprising was musket flints and spherical lead balls, showing evidence of bullet manufacture and evidence of the possession and use of firearms by slaves. This discovery contradicted both the Spanish and British slave codes which strongly prohibited the use of guns by slaves and attached strong penalties to their possession and usage (Fairbanks 1984, p. 2). Surprisingly however, Fairbanks (1972, pp. 90-91) could not identify any elements in the material culture directly associated with enslaved Africans. However, some of the reasons were that the slaves themselves arrived at Kingsley

Plantation with nothing apart from their chains that shackled them together. The fact that most material items were supplied by the plantation owner could have also mitigated against the creation of African material culture. Another reason was that perhaps the African slaves had not had sufficient time to recover from the shocks of forced migration to enable them to begin the process of recreating aspects of material culture related to their African origins. The slaves nonetheless did manage to leave survivals of their language and other behavioural traits in their slave culture of the South, which survive in Afro-American culture until the present.

In South Carolina, as the slaves were engaged in all aspects of plantation work they gained knowledge about South Carolina's fauna and herbs, because of its ecological similarity to their former habitations in Africa, allowing the African slaves to retain many of their African medical practices (Perkins 2008, p. 7). This confirms the assertion made by Roger Bastide (1971, p. 23) that "the slave-ships carried not only men, women, and children, but also their gods, beliefs, and traditional folklore". This reveals the adaptive nature of the slave experience, and the adaptive strategies they applied in creating a system which shaped their new world as well as sustained them through the Middle Passage and plantation slavery (Perkins 2008, p. 11). On the plantations in particular, their adaptive strategies constituted a social and cultural framework that held their beliefs and values and served as normative foundation for their day-to-day lifestyle or way of life.

Socio-cultural material culture: Colono pottery, Chesapeake pipes and blue beads

Material culture representing retentions of Africanisms in North American plantations by the slaves has occupied an important position in archaeological investigations of slave material possessions on the plantations. Notable among these African/slave related material objects involved in the manufacture of African-like pottery, known as Colonoware, on some plantations along the eastern coast of the United States (Ferguson 1992, 1991; Mouer et al 1999). Colonoware comprises a wide-ranging category of open and low-fired hand-built earthenware mostly found on sites related to the colonial period/sites in the south-eastern United States, whether from slave quarters or "Big House" or from Native Indian villages (Ferguson 1992, p. 19; Mouer et al 1999, p. 84; Chodoronek 2013, p. 57; Boyle 2014, p. 119). The varieties of Colono pottery that have been found consist of different forms, paste and surface treatments shaped to resemble European forms. Some of the forms are chamber pots, cups, bowls, pitchers, porringers,

Pipkins and some globular bowls. In South Carolina, archaeologists believe enslaved Africans as well as Native Americans produced the Colono pottery (Singleton 2005, p. 133; Anthony 1979, 1086; Ferguson 1992; Garrow & Wheaton 1989). Deetz (1993, 1988) points to the fact that as early as 1622 enslaved Africans had been settled at Flowerdew Hundred and they definitely made the Colono pottery materials indicating African craft technology on New World plantations.

Similarly, Emerson (1999) has suggested that Africans were involved in the production of tobacco pipes in the Chesapeake. The decorative style, design and motifs of Chesapeake tobacco pipes art are clear evidence that Africans made pipes in Virginia and Maryland in the seventeenth century. Particularly in Virginia, the Chesapeake tobacco pipes recovered archaeologically have motifs that Emerson (1999, p. 60) ascribed to derivations from the decorative art of Nigeria and neighbouring Cameroon. For instance, the double bell or double gong motif as depicted variously on Chesapeake pipes can also be observed on some Cameroonian clay tobacco pipes where it represents ruling class status and membership in a regulatory society", i.e. a group with a function in enforcing rules in the community. The same motif (double bell or the double gong shape) is also found among the Tiv scarifications, Igbo metal works and the Nsibidi ideograms of Ejagham people of south-western Nigeria. The association of the Chesapeake pipes with the African slaves suggests a situation where archaeology is capable of identifying specific groups of people through the material culture in the absence of documentary evidence.

Blue beads also constitute significant components of archaeological materials that have been recovered from African-American sites on North American plantations. Archaeologists have recognised that these beads were used for body adornment as well as cultural and religious functions by African Americans. The study conducted by Stine et al (1996) in the American South revealed that blue beads in particular were commonly used by the enslaved Africans. They suggested that the predominance of the blue beads may indicate that they were an important part of material culture which had received less attention as one of the essential aspects of African-American culture. Stine et al (1996, p. 53) attest that in the past and up to the present era, the people of West Africa wear beads in their hair, on clothing, and as necklaces, bracelets, waistbands, and anklets. Those that convey social meaning may symbolize information concerning wealth, age

grade, marital status, artistic attitudes, and political, religious, and cultural affiliation. Beads have also been associated with myths, with ceremonies such as rites of passage, and with religious cults, made into sculptural beadwork and worn as amulets and charms. These multiple functions assigned to blue beads were acknowledged through reference to ethnographic information, folklore, and oral history associated with West and Central Africa and the American Southeast. Beads had been important socio-cultural artefacts of West and Central Africa long before the arrival of Europeans, having both religious and secular uses in Africa. Their discovery at slave settlements in North American plantations reflects aspects of African American culture.

North American Slave housing

It was always the duty of the plantations' owners to provide adequate accommodation for their slaves, thus houses that were well heated, well ventilated, and reasonably large enough to accommodate a husband, wife, and three or four small children. The recommended cabin size for a family was between 16 by 18 feet and 16 by 20 feet (Breeden 1980, p. 114-39; Butler 1851, p. 327; Collins 1854, p. 423; Orser 1990, p. 127). Based on archaeological investigations of some of the extant slave cabins, Orser (1990, p. 127) bemoans the nonconformist attitude of some planters because many of the plantation/slave owners violated laid-down recommendations of slave housing. A number of the slave cabins were ridiculously small. At Kings Bay Plantation in Florida archaeological investigations revealed that the slave cabin measured 9 by 9 feet (81 square feet) (Adams 1987, pp.173-85). Archaeological investigations at Yaughan and Curriboo plantations in South Carolina have also shown some dynamics in the building styles. Building was generally done by using individual posts, which were placed in trenches just as cob-wall or wattle-and-daub construction was done in West Africa. However, the cabins later went through some morphological changes, especially when the cabins changed from rectangular to square and from irregular to regular. Others were also built on brick piers and incorporated brick fireplaces and were reduced in size (Wheaton et al. 1983, pp. 203-211, pp. 338-39; Wheaton & Garrow 1985, pp. 244-48).

The discovery of the Yaughan and Curriboo slave cabins in the view of Oser (1990, p. 128) was very significant as it represents the recovery of African- styled, clay-walled dwellings at Yaughan and Curriboo since the West African style wattle-and-daub architecture was not common in North America, apart from the Caribbean.

Archaeological investigations of slave housing at Saragossa plantation have also revealed that the slave house was built in double-pen (two room) style with heavy timber-frame structure and a central brick chimney and hearths in both rooms. Each pen contained a single entrance, with a door on the front which was entered through the porch or gallery (Young 1999, p. 58).

Thomas (1998) studied the development of slave cabins at the Hermitage plantation. The study revealed that the earliest cabins prior to 1821 were all made of wood comprising log structures (cabins) and post-in-ground cabins. Between 1821 and 1833, however, brick cabins were built to replace the wooden ones. The brick cabins were considered more permanent than the wooden structures. The enslaved Africans were used to produce the bricks at Hermitage. The Hermitage slaves obviously provided the labour for the building of the cabins just as Frederikssted slaves were engaged to quarry and transport stone blocks to build the main Frederikssted plantation house. The documentation of this African style slave housing in North America is an important undertaking and is also one area in which plantation archaeology can make a major contribution to the modern conception of the socio-historical aspects of plantation life.

Subfloor pits

One significant feature, which archaeologists have uncovered in the slave cabins, is subfloor pits or indoor storage pits or root cellars, which predominantly occur in African American quarters sites in Virginia (Singleton 1995, p. 124; Ferguson 1992, p. 58; Samford 2007, p. 6). Samford (2007, p. 6) describes these features as flat-bottomed pits, cut into the soil under the floors of the houses. These are generally rectangular, but sometimes square or circular, found scattered across the floors of eighteenth and early nineteenth century slave houses, occurring singly or in groups. These pits, according to Singleton (1995, p. 124), were dug by the slaves who used them to store food and conceal valuables, possibly stolen goods. They also shows the resilience of the slaves, who despite the imposition of European architectural styles, still created their own sense of space within their cabins and were most likely a "product of black culture" (Kelso 1984, p. 105). Different interpretations have been placed on the discovery of the storage pits.

Figure 4.4: One slave house at Kingsmill Plantation at Williamsburg (Virginia, USA) had 18 rectangular pits dug into the floor of a room (Samford 2007, p. 5)

At Tidewater, the Native Americans were said to be digging theses subterranean structures during the contact period, and the African cultures from Igbo in Nigeria whose members were brought to Virginia in large numbers as slaves have been documented as using underground pits in the nineteenth century to store personal belongings (Yentsch 1991, p. 4). Other archaeologists have also argued that the use of storage pits in slave quarters may be connected to the conditions of slavery rather than ethnicity, and that they are related to a form of day-to-day slave resistance to planters' control and domination (Hall 1992, p. 386; Kelso 1986; Mckee 1992). Whatever the reason behind their construction might be, a detailed evaluation shows that subfloor pits were more commonly associated with slaves than non-slave households and that they constitute important reminders of the African/slave life on North American plantations.

Slave Foodways

The ground-breaking excavations at slave sites by Charles Fairbanks in the 1960s are a clear indication of the fact that archaeological investigations of slave cabins could provide essential information about slave foodways and health (Fairbanks 1983, p. 24). All archaeological studies of slave quarters on North American plantations have incorporated slave diet or foodways as an important component of plantation archaeology (Gibbs et al 1980; Reitz et al 1985; Reitz 1987; Walker 1985, 1988; Singleton 1995; Orser 1990; Mckee 1999). According to Singleton (1995, pp. 124-125), foodways comprise all activities related to food: from procurement activities (e.g. hunting, fishing, and gardening) to preparation, serving, and consumption. Archaeologists looking for evidence of slave foodways have always studied food remnants recovered from excavations,

particularly from refuse deposits, and indirect evidence of food such as equipment used for procuring, processing, and serving food (Singleton1995, p. 125).

Zooarchaeological analysis has also played an important role in determining slave food habits. This provides evidence of the kinds of animals that were used as food. The amount of meat consumed and the mode of preparations of the meat can all be determined through the analysis of the animal remains recovered from excavations. Zooarchaeological analyses have revealed slaves' diet as comprised mainly of domestic animals with beef, pork, sheep and goat comprising the bulk of faunal remains at most slave sites (Mckee 1999). Chicken appears to be a marginal food item, most probably because of the value associated with the eggs. The enslaved people, however, often received a smaller amount and lower quality of meat portions of these domestic animals. This gave rise to health problems as a result of incessant poor nutrition (Reitz et al 1985, p. 163). McKee (1987) identifies some skeletal remains as meat portions that may have been thrown away from the planters' household. The evidence of fragmented animal bones suggests cutting of the carcasses into smaller portions and this possibly indicates that the meat was boiled in soups and sauces which were the main ways of preparing slave food (Mckee 1987; Singleton1995, p. 125). Reitz et al (1985) have also documented that the enslaved African-Americans also consumed substantial amounts of wild fauna, mostly along the south-eastern coast, where nondomestic food resources were plentiful in the ocean, marshes, and tidal creeks. Other evidence uncovered by Reitz et al (1985) to support the claim that enslaved people hunted and fished on a regular basis was through identification of gun parts, fishhooks, and net sinkers and trap fragments. These nondomestic food resources constituted a major supplement to food obtained from domestic sources.

Beliefs/Religion

Even though the transportation of the slaves through the Middle Passage could be a despicable journey, the slaves are known not to have forgotten the deities and spirits they worshipped, revered and appeased. Their enslavement thus did not make them lose their faith in the rituals and belief systems that had sustained them for generations. Their belief systems, their ideas of cosmology, eschatology, medicine and sorcery were transported to the New World and continued to link African Americans to Africa (Orser 1994, p. 35). Albert Raboteau, in expressing his views about slave religion writes, that "one of the most durable and adaptable constituents of the slave's culture linking African past with

American present was his religion" (Raboteau 1978, p. 4). This affirms that religion or spirituality formed a significant part of the culture of the enslaved people, and it was the aspect of their lives that spiritually tied them to their kinfolks and familiar ways of life in Africa. In spite of the fact that these enslaved Africans may have come in contact with other cultures and religions, the African flavour in their religious expressions was never altered.

It is crucial to recognise the numerous archaeological discoveries of a variety of objects which are sometimes inexplicable but are strongly believed to have been used for religious/spiritual purposes by enslaved Africans during their periods of enslavement on North American plantations. Some noteworthy examples include pottery bowls with crosses incised on their bases, and white clay marbles, coins, and pewter spoons with "X" marks carved into them. Archaeologists have also recovered myriads of artefacts comprising beads, pebbles, amulets, cowrie shells, reworked glass, and ornaments. Moreover, archaeologists have recovered from excavations hordes of quartz crystals, polished stones, pieces of chalk, ash, iron nails, blade-like fragments, bird skulls, crab claws, perforated coins, and bone disks that were concealed under the brick and wood floors of dwellings (Brown 1994; Ferguson 1992; 1999; Galke, 2000; Fennell 2003; Leone & Fry 1999; McKee 1995; Patten 1992; Samford 1996; Wilkie 1995, 1997; Young 1996, 1997).

The discovery of these objects has baffled archaeologists mainly because the meanings of the objects cannot easily be determined, stimulating research on the religious beliefs of enslaved people (Brown & Cooper 1990; Jones 2000; Orser 1994; Patten 1992; Russell 1997; Wilkie 1997). Archaeologists have therefore resorted to the use of ethnographic analogies, oral history, and thoughtful speculation in order to gain insights and offer interpretations of the meaning and use of these enigmatic objects. These studies of slave lifeways, therefore have relocated historical archaeology towards an anthropological understanding of the nature of African/slave life in the slave communities in North America (Orser 1990, p. 129; Singleton 1995, p. 130).

At the Jordan plantation south of Houston in Texas, Brown and Cooper (1990) made an astounding discovery of a material assemblage expressive of ritual paraphernalia which most likely was used for divination or healing purposes. The materials were recovered from what they described as a "restricted" area of a single slave cabin occupied by slaves

and later wage labourers. Some of the main body of materials recovered included a tablespoon, cast-iron kettles, pieces of used chalk, bird skulls, fragments of a small weighing scale, an animal paw, samples of medicine, seashells, bottles, and a chert projectile point. Sealed and hollow metal staffs, and smaller cylindrical metal objects have been described as important symbols of the healer/magician's power. These conclusions came to light as a result of ethnographic studies with Cuban spiritual/ritual leaders who made use of similar ritual objects (Brown and Cooper 1990, p. 17). Another large cache of artefacts found at the Carroll House in Annapolis, Maryland (Jones 2000) included quartz crystals, a clear bead, hand-painted, pearlware bowl, a smooth/polished black stone, and a bowl with a design resembling a Bakongo cosmogram. The bowl may have been used as a container for the crystals and other objects. Other artefacts from the Carroll House included an ivory ring, and a bubble shell. The artefacts recovered from the excavations at the Carroll House suggest that one, or perhaps more, of Charles Carroll's slaves may have been a conjurer or practicing divination.

The contribution of oral histories to the interpretation of certain objects used by slaves has also been significant. During the 1930s as part of the Works Progress Administration, oral history was collected from a number of former slaves (Rawick 1972-1979), to recount real life stories and experiences concerning their enslavement on North American plantations. These oral histories have served as avenues for the interpretation for some artefacts recovered from slave sites. Some informants have recounted that perforated coins (mostly of Spanish origin) recovered from various sites in North America were used as charms. These coins were strung on (cotton) threads and worn around the ankle or neck. The spiritual connotations of these are varied. Some individuals wore them as luck mascots and others too wore them purposely to prevent maladies like rheumatism, but the majority of the users wore the coins for protection from evil and from bad omens (Rice & Singleton 1991). James Davidson's ethnographic and folklore survey regarding the use of coin charms in the United States revealed that perforated coins were used in the context of providing protection against harms whether from natural illness or supernatural means (Davidson 2004, pp. 23-26).

Mckee (2000, p. 196) has also identified copper alloy charms in the shape of a clenched human fist recovered from slave quarters on the Hermitage, Andrew Jackson's plantation home outside Nashville, Tennessee. Archaeologists have identified that the fist objects

are similar in form to the *figas* that are commonly used even today throughout Latin America as charms for good luck (Orser 1994, p. 39; Smith 1976). Oral histories have also suggested that the fist charms are generally referred to as a "hand" used to ward off witchcraft (Orser 1994, p. 40). Similarly, Singleton (1999, p. 163) notes that other objects which by their nature have perforations such as buttons and beads may have been strung together as a charm string that was believed to induce good luck for its user.

Leland Ferguson's identification of Colono earthenware vessels at South Carolina also gives indications of strong ethnic ties between South Carolina and West Africa. Ferguson (1992) recovered from the archaeological record a number of Colonoware bowls, specifically those recorded from underwater sites in south Carolina that were marked on the bases. The vessels were mainly marked on the exterior and some were also marked on the interior surfaces. Most of the marks were 'X' or crosses (cruciform), and a number of these motifs/symbols were enclosed in circles or squares. Engraved marks on the interior of flat-bottomed bowls were recovered from slave quarters at Curriboo Plantation on the Santee River, while an incised mark on the exterior base of a bowl was also recovered from the Cooper River adjacent to Mepkin Plantation (Ferguson 1992, p. 112).

Ferguson (1992, p. 114, 1999, p. 118) explained that the marks appear to be Bakongo cosmograms. This ideographic religious symbol or cosmogram is a core symbol of the Bakongo culture, and the associated bowls were containers of *minkisi* medicine/spiritual bowls. This implies that some African ritual traditions originating in the Bakongo region in D.R. Congo were transformed into African-American traditions (Young 1996, pp. 146-147). *Minkisi* possesses overriding powers which control the Bakongo cosmos, connecting the living with the powers of the dead. *Minkisi* was/is always kept in containers which include leaves, shells, bags, wooden images, cloth bundles, and most importantly ceramic vessels, some of which have been found in the New World. The processes involved in making *minkisi* involves packing a variety of spirit-embodying materials which include cemetery earth, white clay, stones, and other items (Ferguson 1992, p. 114). Fennell (2003, p. 2) has argued that these objects typically appear in contexts which indicate they were used in private, often undercover settings. Their creators and users therefore used them in their private religious rituals and to express individual creativity in the forging of a new spiritual bond with the spirit world.

The age old tradition of Africans associating spirits/medicines or charms with earthenware vessels, coupled with the fact that these religious marks have exclusively been found on hand-built earthenware bowls and not European ceramics, suggests the bowls functioned as receptacles for *minkisi* or were used in rituals in relation to *minkisi* (Ferguson 1992, p. 115). From the foregoing, it can be deduced that in the face of the repressive nature of the slave system in North America, which was based on suppression of all forms of African culture, African beliefs and customs nonetheless stayed alive and the slaves successfully transmitted them to their descendants. Despite the cultural influences from colonial Europeans and indigenous Native Americans, African culture systems remained resilient and served as a catalyst for the formation of Afro-American cultures in the New World.

Violence against slaves on North American plantations

The planter's dominance, power and controls over the enslaved workers were reflected in the physical violence and brutalities against the slaves. These inhumane treatments of slaves become a prominent feature in the lives of enslaved African-Americans on the North American plantations. Recognising that violence played a significant role in plantation society is also an attempt to understand the enslaved African-American experiences on the plantations so as to integrate it into all facets of models and interpretations of plantation life. In recounting violence and brutality inflicted on enslaved people throughout the Americas, Farnsworth (2000, p. 146) proclaims that the slave-master relationship was replete with endemic physical violence towards the enslaved men and women in North America plantation societies. Enslaved women suffered sexual violence which was disruptive to their family life and children also received different forms of punishments. Flogging was said to be the most common form of punishment, while detention in stocks, house basements, or small jails was also a frequent slave punishment. Reassignment of slaves to uncomfortable tasks such as sending house slaves to work in the fields or on a sugar mill or boiling house was also common. More ruthless punishments in the form of amputation of limbs (feet of runaways), beheading and hanging were frequently meted out to the slaves.

The archaeological manifestation of violence against slaves is, however, limited in comparison with other material culture. In situations where there are archaeological attestations to slave violence the discussion appears relatively scanty. Some

archaeologists have even argued that some of the emerging civil rights movements in North America were deeply rooted in traditions of resistance which often had historical antecedents of resistance against slavery (Orser & Funari 2001, p. 62). Notwithstanding the limited archaeological interpretation of poor treatment of enslaved people, some instances of violence and brutalities against slaves have been discussed here.

Leland Ferguson's excavations at the Pettus and Utopia sites at Kingsmill plantation in Virginia yielded metallic artefacts that included shackles, locks, and keys. However, there is no further detailed explanation of the recovery of the manacles except the caption beneath the picture which states that the objects "symbolize the rigid controls of slavery in colonial Virginia" (Ferguson, 1992, p. 47, Fig. 38). Since the materials were recovered from plantation sites whose occupants included slaves, they could be well understood to be material manifestation of slave discipline which comprised shackling and detention. In a related circumstance, Brown and Cooper (1990) offer brief information about shackles excavated from one of the slave cabins of the Levi Jordan Plantation in Texas. They described the discovery as "a shackle chain bricked into the west wall" (Brown and Cooper1990, p. 16).

The seemingly insufficient interpretation was that the occupant of the cabin was "an individual who probably functioned in a social control capacity (Brown & Cooper 1990, p. 16). They make mention of a high number of weapons-related artefacts, as well as a very high number of African and European-American status items such as carved bone, drilled shells, store-bought jewellery, and coins of high denomination from abandonment level to back their claim concerning the occupant of that particular cabin. The fact that the occupational level contained a very low frequency of artefacts, suggests that the cabin at certain points in time functioned as a jail (Brown & Cooper1990, p. 16), apparently to carry out punishment against slaves who were said to have broken plantation rules. On the other hand, Samford (1996), in her attempt to recount the archaeology related to African-American slavery and material culture, describes the Levi Jordan Plantation as a place that shows traces of plantation punishment in the form of leg manacles bolted to the wall together with the conjurer's kit. These material remains, and the interpretation offered by Samford (1996, p. 107) indicate the strength of an African-American belief system in the face of mental and physical abuse perpetrated by the plantation owners/masters.

It seems violence perpetrated against slaves received official state endorsement but the actual application of violent punishment against slaves seems to have had limited impact. Epperson (1990; Wilson-Fall 2015) discuss the case of a particular slave known as Madagascar Jack, on the Robert "King" Carter plantation at Virginia. Madagascar Jack was considered a notorious truant slave who had the penchant for absenting himself from his assigned plantation duties. His incessant absenteeism from the plantation compelled a court to sentence him to have all of the toes cut off from one of his feet as a form of punishment and also to serve as terrifying deterrent to others who might behave in the same manner (Epperson 1990, p. 29). Truly, Madagascar Jack had his toes cut off just two days after the sentence. The plantation owner, Robert "King" Carter, kept recommending the same punishment for his slaves claiming he had succeeded in "curing many a negro of running away by this means". However, Madagascar Jack still seemed to be a disciplinary problem, as well as a habitual runaway five years after his toes had been cruelly removed. It can be observed that in spite of Carter's frequent imposition of this punishment, it had only limited effectiveness in terrifying others from the like practice (Epperson 1990, p. 29). Though Epperson's submission here is a typical case of cruelty against plantation slaves in North America and the violence emanated from a planter's power and authority, his submission is not connected to any material culture from archaeological contexts.

As violence against slaves became an integral part of plantation life, it took different forms from plantation to plantation. Wilkie (1994) identifies that flogging was the common slave punishment on most plantations in Louisiana. She refers to the testimony of a former Louisiana slave that some callous planters engaged in continuous whipping of their slaves including pregnant women: "Some white folks were kind to their niggers, and some were bad, always whipping, whipping, whipping" (Wilkie 1994, pp. 32-33). Slaves who did not conform to the plantation rules and standards could be demoted within the task hierarchy. Consequently, sedentary house labourers such as seamstresses and weavers who showed signs of weariness were sent to the field to work alongside the field hands "for the benefit of their health" (Hundley 1860, p. 358). The recalcitrant slaves who committed extreme violations of the standards imposed by the planter were often sold away from their homes, family, and friends (Orser 1990, p. 116).

It is quite clear that material culture that shows evidence of slave violence and punishment sometimes becomes difficult to ascertain. Metallic objects of violence like shackles and burden weights (Armstrong 1990) may survive but not in many archaeological sites. Much in the same way, it is difficult to use human skeletal remains to establish the kinds of physical abuse that a slave suffered. Oftentimes issues relating to planters' power and domination as well as slave resistance that dominate archaeological discussions of plantation life are expressed in different direct (material), indirect, and symbolic forms (Farnsworth 2000, p. 154). Farnsworth (2000, p. 155) suggests that in order to fully understand slavery, archaeologists ought to recognize that violence, fear of violence, and avoidance of violence dominated African-Americans' lives on the plantations, and just as archaeologists make use of other intangible elements in the reconstruction of the past, the issue of slave violence must also be incorporated into all archaeological discourse of slavery.

Slave resistance on North American plantations

The authority and the powers that the slave masters/planters wielded and exercised over the slaves were not absolute, as the slaves also held some amount of power over their owners. Both archaeological and historical records have demonstrated that the enslaved men and women on the plantations did not submissively accept their status as slaves without putting up resistance. Orser (1990, p. 116) argues that because the slaves were the main source of labour on the plantations they had some measure of power as they could hold the whole plantation system to ransom through their various acts of resistance. The slaves, therefore, did not succumb to an absolute totalitarian plantation institution (Elkins1959, p. 103). Various records of slave resistance on North American plantations indicate that the slaves were not all the time victims of slavery and that the plantation slaves managed to develop some kind of leadership, which afforded them the opportunity to plan resistance and rebellious undertakings to establish their self-esteem (Thorpe 1962, pp. 172-173; Rawick 1972, p. 9). The expression of slave power was through different acts of resistance which were usually in the form of direct actions of running away, open rebellions, cutting down crops, and theft. There were also less direct acts by way of sabotage, malingering, feigning illness or breaking and hiding tools and maiming animals and sometimes pretending ignorance (Singleton 2010, pp. 188-189; Orser 1990, p. 116; Aptheker 1983; Cheek 1970; Genovese 1970; Heuman 1986; Okihiro 1986).

A typical form of covert slave resistance, which is commonly observed in the archaeological record, is the use of the residential spaces like the houses and yard areas of the slaves. The slaveholders, in their quest to impose their ideals of good sanitary practices on the slaves' living areas, purposefully designed and laid out the slave quarters in such a way that surveillance and supervision would be easier so as to promote domestic and environmental hygiene within slave quarters (Singleton 2010, p. 189; 1988, pp. 354-355; McKee 1992). The enslaved people, however, resisted and disregarded such imposition by transforming their living spaces in different ways. Certain times the slaves intentionally kept their house and yards dirty to resist planters' intentions for cleanliness, orderliness, and control of the quarters (Mckee 1992, pp. 206-207). Samford (2007) reports of slaves digging subfloor pits within the rooms of their houses to deface the rooms. Archaeological investigations conducted at Robert "King" Carter plantation at Virginia also revealed similar pits dug by slaves in their rooms. The features were interpreted as storage areas beneath eighteenth-century slave dwellings. It was suggested that each pit was the private storage locker of a single individual or family, which provided a means of concealment from other slaves as well as from the master. It was a way for the slaves to contest the hegemonic spatial conceptions of the plantation master (Epperson 1990, pp. 32-34). Elsewhere in the Caribbean, Armstrong and Kelly (2000) noted that the slaves at Seville Plantation at St. Ann's Bay in Jamaica transformed their living quarters to their own advantage. When the slaves had the opportunity to relocate as a result of destruction of the former settlement by a hurricane they intentionally established the new village at a far distance shielded from the planters' view by dense bush (Armstrong and Kelly 2000, p. 380). Armstrong and Kelly (2000) therefore explored oppressive conditions of the slaves as well as how such people who were trapped in the conditions of slavery provided their own creative solutions to counter the problems of daily life, and enhanced and developed their own cultural identities and eventually created a distinctive African American community.

In looking for direct material manifestations of daily acts of slave resistance, archaeologists are bound to encounter some inherent complexities because some artefacts can be used in muted or ambiguous ways to suggest slave resistance (Orser 1998, pp. 67-9; Orser & Funari 2001, p. 62; Mintz & Price 1976). This has to do with the perception that when some excavated artefacts are fully contextualized within the slave community, it can be understood that such artefacts may have been used functionally and

symbolically. Thus the slaves may have used some seemingly utilitarian objects"—pottery and smoking pipes – to stimulate group interrelation and self-identity (Ferguson 1991; Orser 1991). Orser and Funari (2001, pp. 62-63) further contend that the usual periodic modes of slave resistance such as sabotage of machinery and tools, surreptitious destruction of crops or injuring of animals, feigning ignorance, clumsiness, self-mutilation and suicide can hardly be visible in the archaeological record. It would therefore be difficult for archaeologists to identify the material association of these acts of resistance because it could easily be assumed that such materials were ordinary material associated with the plantation and as such performed wholly mundane functions. Orser (1994, p. 39) affirms this by demonstrating that some pottery material and metal fist amulets made and used by slaves could contain silent messages of everyday resistance but may not be easily interpreted as signs of slave resistance on the plantations. Ferguson (1991) has unequivocally maintained that the production and use of Colono ware on some North American slave plantations represents a form of resistance.

Colono ware indeed goes beyond material manifestation of African presence in North America as the sherds symbolically represent the building of African American culture as well as maintaining an unconscious resistance to slavery and the plantation system. By this, the enslaved African workers became empowered to promote and sustain their traditional ties to their ancestral culture in Africa (Ferguson 1991, p. 37). Archaeological studies of slave resistance further incorporate evaluation of slave agency which involves the ability of the enslaved people to take some measures and initiatives towards their own empowerment in spite of the dominance and control imposed on them by the enslavers. Archaeological findings demonstrating slave agency or slave economy concern the efforts that the enslaved people put up to augment their material needs in the face of inadequate supplies from the plantation masters. In most plantations the enslaved men and women had always embarked on extra activities such as hunting and fishing, raising of livestock, craft production, gardening, and trading (Singleton 2010, pp. 188-189). Through these activities, the enslaved people managed to improve their lot and controlled their lives in the face of untold subjugation. Another plausible way through which slave resistance can be understood is to concentrate archaeological studies on maroon settlements, a type of historic community established by former slaves who liberated themselves through resistance and rebellion. Archaeological investigations of maroon settlements provide the opportunity to understand material expressions of cultural survival of the enslaved people

who were compelled by peculiar circumstances to settle in unfamiliar environments and lived among individuals with whom they were never related by lineage, tradition or language family (Orser & Funari 2001, p. 64). It can be recognised that a number of archaeologists have provided insights about maroon settlements where many freed and escaped blacks slaves lived in the New World (Deagan & MacMahon 1995; Oser & Funari 2001; Agorsah 1994, 1993; Guimarães 1990; Weik 1997). Even though archaeological studies of the African diasporic experience could contribute immensely to the understanding of the tangible evidence of African cultural traits in the maroon polities, the issue of maroon archaeology is beyond this thesis because of its focus on plantation life of the enslaved Africans.

4.9 Discussion

It is apparent from the forgoing discussions that even though the New World slave plantations varied considerably across space and time, they share some similarities with the African (Gold Coast/Ghana) plantations. The main objective of this chapter has been to examine some of the New World slave plantations and to show how both the historical record and the archaeological records can be used to reveal the variations and the similarities in plantation archaeology in Africa and the New World. In an attempt to show how the archaeology of the New World plantations compares with archaeology of the African (Gold Coast) plantations, some differences and similarities have been identified. Some of the difference and the similarities have been outlined in Table 4.1

Differences

In comparative terms, the dissimilarities are seen in various scenarios. In the New World, the main idea underlying the establishment of the plantations in the Americas was embedded in the spread of European capitalism, while the African/Danish slave plantation system was largely influenced by abolitionist ideas, which sought to replace the trans-Atlantic slave trade with plantation agriculture. The sizes of the New World plantations were those of large-scale agricultural enterprises that in some places engaged more than three hundred enslaved Africans. The African/Danish slave plantations were comparatively smaller in size and engaged far fewer enslaved people. Although plantation slaves in different parts of the world are known to have resisted oppressions on the plantations, acts of resistance on African plantations are less visible than slave resistance in the New World.

Differences	
Africa plantations	**New world plantations**
The concept of slavery in Africa (especially in the pre-abolition era) is exhibited in trading in humans and pawning	The New World slavery was about engaging people to offer unpaid labour
African plantations were influenced by Abolitionists' campaigns as a replacement for the slave trade	The New World plantations were influenced by *Plantation Economy* concept meant to propel European industrialisation
African plantations were integrated into the colonial set-ups	New World plantations were pure private/ capitalist/mercantilist enterprises
African plantations were characterised by small land holdings that engaged fewer than 50 slaves at a time.	The New World had huge plantation set-ups. In most cases, comprising thousands of acres and more than two hundred enslaved workers at a time. (E.g. Drax Hall plantation in Jamaica had more than three thousand acres, engaged more than three hundred slaves at a time).
In Africa/Gold Coast, slave settlements are not extant.	Slave settlements are extant in most places in the New World.
Slave brutalities were not common in the archaeological record	Slave brutalities were common: chaining, whipping, amputation, beheading, etc.
Slave resistance not visible in the archaeological record (no maroon communities). Runaway slaves likely became integrated in the existing communities	Slave resistance was common (many maroon communities established in Brazil and the Caribbean)
Slave codes did not apply in Ghana	Slave codes were enacted in the Danish Caribbean to control slaves' behaviour
Similarities	
Slaves' material culture: low fired pottery, cowrie shells, clay tobacco pipes, beads, reused European materials	Similar slave materials have been recorded in the New World. E.g. In North America Colono pottery, Chesapeake pipes and blue beads are some of the salve material culture
Planters' material culture: fine ceramic materials, ceramic smoking pipes, bottles of beer, wine, spirits, bitters, mineral water bottles, medicines and food cans/bottles	Similar materials have been recorded in the New World
Planters' buildings were made of cut stone quarried from the nearby mountains. Danish Planters' houses in Ghana also functioned as convalescent centres.	Superior planters' architecture made of stone, brick and quality wooden block buildings for planters, with aesthetic beauty.
Inferior slave architecture: Danish slave architecture was mainly wattle and daub architecture	Inferior slave architecture: wattle and daub architecture in the Caribbean and Brazil (Cuba had enclosed walls to prevent public view). In North America slaves used wooden cabins, and other places brick buildings built haphazardly.
Poor slave diet which called for slaves supplementing it themselves	Slaves engaged in ancillary work: gardening, hunting, fishing, trading barter, craft production to supplement their food and material possessions
Objects of slaves'/African indigenous religion found in most African plantations	Slaves in the Americas largely improvised and adapted materials in the New World to express their African beliefs
Slaves lived in tropical African climate and mountainous landscape	The enslaved people were largely transported to similar tropical and subtropical climates and mountainous landscapes in the New World (the Caribbean and the North American southeast)

Table 4.1: Comparative analyses of the Gold Coast/Ghana and New World plantations

One other difference that must be reemphasised is the severe slave brutalities in the New World in contrast with seemingly cordial relations between the Danish planters and their slaves in the Gold Coast. One of the observations made during the comparative study is that the Frederikssted material culture and materials from other Danish plantations (excavated prior to this study), and the documentary records of Danish slave plantations have not yielded information or materials that show slave brutalities and other extreme forms of slave punishments. The Danes seemed to have had a peculiar nature of being genial colonials and compassionate slave traders and thus treated their slaves humanely. Hernæs (2011, p. 243) identified that the Danes appear to have believed in a humane slave regime in the spirit of Isert's original vision of setting up the first Danish (Frederiksnopel) plantation.

In view of this, Frderiksnopel slaves enjoyed some form of pension fund, received medical care, held funerals for the dead and celebrated childbirth as a joyful event. The slaves were also 'supported with wages and clothes' which meant that the slaves were to be treated 'in a friendliest manner'. A possible explanation is that the kind of slaves the Danes engaged in the Gold Coast were constantly coerced into compliance, without the least chance to rebel or resist the planters' orders. Hernæs (2013, p. 177) mentions that most of the slaves at Frederiksnopel plantation were plagued by ill-health and that the fifteen slaves selected to work on Frederikssted plantation were those who appeared to be in good health. It could also stem from the submission made by Hall (1992, p. 1) that comparing the British and the Spanish on one hand and the Danes on another, it can be observed that the kingdom of Denmark with its satellite Norway was not an European power of the first rank. For that matter, its clout as a colonizer was to some extent compromised, and as such, the Danes could only engage slaves who were at all times malleable.

One major difference observed between the Danish plantations in Ghana and the New World plantations is the presence or absence of slave quarters on the plantation landscape. Whereas archaeologists have encountered a number of extant slave settlements on most New World plantations, so far, archaeological researches of Danish plantations in Ghana have not yielded surviving slave settlements, though they were essential components of

the plantation set-up. The inability to locate the slave settlement could well imply that the building materials were not durable materials, mostly wattle and daub buildings that collapsed and disintegrated after the plantations ceased operations. Documentary records available give inadequate descriptions of the slave life on Danish plantations in Ghana, while archaeological researches so far have not identified any extant slave settlements.

The non-discovery of the slave quarters is a common problem even among the earlier researches on a Danish plantation sites in Ghana. In the first archaeological excavations conducted on Danish plantation in Ghana, DeCorse (1993) makes no mention of slave settlement on Daccubie plantation, which is described as one of the successful plantations in Danish colonial history in Ghana. DeCorse's description of only the main plantation house is seen as viewing the plantation through the eyes of planter elites who formed a specific historical record in Ghana. We therefore have no idea about the enslaved African workforce whose efforts made Daccubie outstandingly successful.

At Brockman plantation, excavated by Boachie-Ansah (2007b, p. 543), concerted efforts were made to locate the remnants of the house of the eight enslaved Africans on the plantation. Particular attention was paid to the sloping areas of the Brockman landscape as it was the tradition of the Danes to build their house in elevated places overlooking the residences of the indigenous population. However, no remains of the slave settlement were located. Similarly, at Bibiase plantation oral traditions collected from Abokobi village confirmed the existence of an African slave village at Bibiase (Bredwa-Mensah 1996a, p. 450). Ground survey only revealed an area characterised by a refuse mound and five baobab trees (*Adasonia digitate*). This area could hardly be described as the slave settlement as no architectural remains were found.

Though there is relatively ample description of the slave settlement at Frederiksgave plantation, during the period of excavation at Dwaben (the slave settlement), there were no visible standing masonry ruins apart from the oral account that the Danish plantations located at the foothills of the Akuapem Mountains had small slave villages by each side of the road. The slave village on the Frederiksgave known as Djabing, or Dwaben, consisted of two rows of ten houses on each side of the tree-line alley that linked Christiansburg Castle on the coast to the plantation in the interior (Bredwa-Mensah 2004, p. 209). The situation where slave settlements are not found in Ghanaian slave plantations sharply contrasts with the general trend in the New World. In Brazil, slave houses known

as *senzalas* as well as q*uilombos*—self-emancipated communities —created by slave runaways were widespread.

Archaeologists with interest in slave lifeways have undertaken archaeological researches in these areas to understand plantation life of the enslaved African workers. In Cuba housing of plantation slaves was in the form of *bohios* (small, detached, timber-frame, post-in-hole buildings) and *barracones* (usually masonry buildings of varying sizes and shapes). These have attracted archaeologists' attention to reveal slave lifeways in Cuban plantations. In North American plantations, slave cabins are clearly identifiable, and in most cases, archaeologists have been able to identify them for excavations for the purpose of understanding Afro-American life on the plantations. Archaeological research at the slave settlement would have undoubtedly provided more comprehensive information about slave life, and to some extent slave-master relations on Frederikssted plantation. The modern conception of the sociohistorical dimensions of plantation life can be better enhanced through the documentation and research at the slave quarters.

It will also further contribute to the archaeological study of the significance of both synchronic and diachronic studies of slave housing (Osrer 1990, p 128). This way, we would be better able to determine Africanisms on the plantation landscape in general and gauge the full contributions of Africans to the development of the plantation system. Fairbanks (1984, p. 8) has reiterated that in most situations even planters, overseers, or visitors seemed to be oblivious of many aspects of slave life on the plantation. This is an indication that many of the written records about enslaved workers are inaccurate, and historical archaeologists have the privilege to identify some of these details about slave life and the inequality that existed between the slave workforce and their enslavers, thereby providing the means towards broadening our current understanding about plantation phenomena in Africa.

Similarities

Despite these differences, the comparative study has made it possible to uncover some similarities among the African and the New World plantations in different situations. The comparative study therefore allows us to examine the uniqueness and the similarities of plantation archaeology in Africa as well as the Americas. One thing that is commonly found among both African and the New World plantations as observed by Cooper (1977,

p. 13), is that because African slaves lived and worked on plantations, their living conditions were in some respects similar to those in antebellum South America and the Caribbean. They faced hard work, sometime severe punishments and rigid mechanisms of social control. Without doubt, accumulation of profit was not the only determining factor of plantation agriculture. One ideological core underlying European plantation systems in different parts of the world was the expansion of European capitalist economy/ markets and the culture of the European bourgeoisie. This became a powerful force in pushing Western slave holders/owners to develop regimented, closely supervised, and intensely employed labour forces (Cooper1977, pp. 12-13). This regimentation of the plantation labour can be observed in both the New World and Africa.

It has also been revealed through this study of plantation slavery in Africa and the New World that institutions and attitudes have played a major role in encouraging the establishment of a plantation system and covertly encouraging plantation slavery. The Christian missions have been actively associated with the plantation in the Americas. Their sermons on various New World plantations have centred on preaching of submissiveness to authority by the enslaved workers; by doing so, they encouraged enslavement. Likewise in West Africa the development of cocoa plantations both in Nigeria and Ghana was spearheaded by the Church Missionary Society (CMS) and the Basel Mission respectively (Olabimtan 2013). However, these African missionary societies preached a replacement/alternative concept so that plantation agriculture could replace slavery and all its forms in Africa. It can also be said that in almost all slave plantations of the world, slave owners have always tried to create some kind of social order; however, slaves have also tried to bend that order in situations where the order could not be broken. This has always resulted in slave resistance, brutalities, rebellions and runaways which were commonplace in most plantations in both Africa and the New World.

Slave plantations, wherever they were established, have been considered as economic as well as social institutions, and therefore incorporated these phenomena in their set-up. When we consider slavery in terms of both social and economic institutions it becomes obvious that one of the main objectives that drove slave masters to acquire more slaves in many instances, was for prestige apart from as a source of labour and wealth (Bohannan and Curtin 1971, p. 265). Another dimension of slavery, which permeated

through all slave societies including plantation slavery, is sexual subordination or sex slavery. This is where the slave master established affinal relationships with female slaves. This gave the master-husband-father fuller control of his offspring with the slave wife than he had over the children of his free wives.

4.10 Conclusion

In general, historical or plantation archaeology in North America, the Caribbean and Brazil involving enslaved people seeks an understanding of the processes by which Africans and their descendants in the New World lost, modified, or retained their cultural heritages, and at the same time managed to create new cultural and behavioural systems in environments characterized by European domination, colonialism and plantation slavery (Handler & Corruccini 1983, p. 66). Plantation archaeology in the New World has again demonstrated that the enslaved Africans brought little in terms of African material culture. Sites in the New World have occasionally produced a few waist beads or insignificant bracelets that were not worth removing, and perhaps a few ceramic tobacco pipes (Posnansky 1984, p. 198; Handler 1997, p. 114, 1983). Though slavery was seen as a traumatic experience, which dislocated people to different environments, the slaves still retained a knowledge of their former African ways of doing things which enabled them to adjust to their new environments and ensured cultural continuity (Posnansky 1984, p. 198; Brathwaite 1971). They took to the New World their skills and the intelligence of their ancestors, which enabled them to make pottery, and other craft works, which became functional substitutions for original African cultural elements reflected in their secular and religious behaviour and which have survived in the archaeological record.

Studying the New World plantation archaeology, especially for the early colonial period during which historical documentation on African life was frequently very limited and highly ethnocentric, the archaeological data provides an alternative interpretation to that presented by the limited and biased documentary sources (Symanski 2012, p. 145). Archaeological studies of the slaves' economy in various locations in the United States, the Caribbean, and Latin America, has enhanced our understanding of the material possessions of the slaves. The slaves did produce certain material culture on their own, disproving the notion that material remains recovered from former slave settlements represent only the material culture of 'people with power' and influence or slaveholders.

The implication here is that the enslaved men and women obtained some of their personal and household possessions through production, purchase, barter, or trade, a clear indication that the slaves wielded some influence on their material lives, despite the fact that their entire life was extremely circumscribed (Singleton & Souza 2009, p. 454).

The way the slaveholders manipulated the plantation space is what Symanski (2012, p. 133) has defined as a dialectical relationship. This comprises a set of opposing scenarios such as white planters of European origin versus black African slaves or slaves of African descent; planters' stone and tile houses versus slaves' wattle-and-daub cabins; European refined white earthenware versus locally made low-fired black pottery; and European modernity versus slave "primitiveness." These oppositions were promoted by the planters' view of the social space of the plantation as a place of cultural dichotomy. Consequently, the planters and slaves perceived the space of the plantations in different terms. Planters' use of industrially mass-produced wares highlighted the socio-economic value that they derived from the capitalist system, to which the planters ideologically subscribed. The slaveholders' perception of the plantation landscape was always rooted in their idealized world in the form of modern, 'civilised', and bourgeois Western Europe. The planters made constant references to Western Europe as it symbolised the most luxurious material culture such as refined earthenware and porcelains, fine smoking pipes, and neoclassical architecture. This planter perception is akin to the "modern world system" envisaged by Deetz (1996, p. 5; Orser 1996, p. 27) making historical archaeology to focus on the modern world, propelled by the spread of European culture throughout the world.

On the other hand, the widespread production and use of low-fired earthenware imbued with symbolic values by the slaves is indicative of their African backgrounds. The space of the enslaved people was characterised by a cultural background grounded on system values that were very different from those that the European planters were assiduously imposing on the entire plantation landscape. This often resulted in slave reactions and resistance. Historical archaeology offers a good opportunity to study these dynamic interactions ensuing between the slaveholders and the enslaved Africans by focusing on the dissimilar material culture on the plantation settlement, and can challenge the often biased narratives documented by the European slave holders. Such archaeological research on New World plantations will no doubt demonstrate the intricacies of plantation

life; detailing what it meant to be a slave and what it meant to be a slaveholder on New World plantations.

Chapter 5

Research methods

5.1 Introduction

My methodology derives foremost from previous archaeological research in the foothills of the Akuapem mountains. Christopher DeCorse's (1993) excavations at Daccubie plantation represent the first concerted efforts to understand plantation life with the use of the archaeological data. Bredwa-Mensah's (1996a, 2002) extensive archaeological and restoration works at Bibiase and Frederiksgave plantations and the resultant Ph.D. dissertation rekindled research into plantation archaeology in Ghana. These are the first extensive and systematic archaeological research projects undertaken to investigate Danish plantation systems in the Gold Coast. Culture contacts and plantation life-ways emerged as dominant research themes. The previous works unearthed the interactions on the plantation settlements and analysed the effects of the Danish presence on the natural and the socio-cultural environment of the Akuapem Ridge area. Also, archaeological, archival and ethnographic data were employed to explicate concerns such as ethnicity, gender roles, dietary patterns and other concerns on Danish plantations on the Gold Coast during the nineteenth century A.D. (Bredwa-Mensah 2004, pp. 209-223). In this research I employed three interconnected archaeological research methods. These include surveys, excavations, and oral traditions.

The discovery of Frederikssted plantation in 2010 was good news to the archaeological fraternity in Ghana. This is because Frederikssted was mentioned in documents such as those by Jeppesen (1966), Nørregård (1966) and Møller-Jensen et al. (2008) but its exact location in the Dodowa area was unknown, and all earlier attempts made to locate it proved fruitless. However, in 2010 Frederikssted was discovered through the agency of some palm wine tappers and basket weavers. The Frederikssted plantation was selected as one of the sites for the University of Ghana archaeology field school on three consecutive occasions, 2011, 2012, and 2013. The 2011 Field School was directed by the late Yaw Bredwa-Mensah (former head of Archaeology, University of Ghana), while I co-directed both the 2012 and 2013 sessions with Dr Clement Apaak, also of the Department of Archaeology and Heritage studies, University of Ghana. During these

years, excavations were conducted around the stone ruins of the Frederiksted plantation building which has been described as Locus 1. During walkover reconnaissance a series of mounds were discovered at the north of the building. This place was described as Locus *2* and was the centre of excavations in 2015 as part of this dissertation. The 2015 excavations build on the previous field school excavations. However, Locus 1 results have not been published for which reason they have been included in this thesis. Materials from Locus 1 in earlier excavations were, consequently, analysed together with the 2015 materials at Locus 2.

5.2 Previous Works

Much of the information about Danish plantation systems is derived from both historical and archaeological sources. The works of Danish historians such as Norregard (1966), Per Hernæs (2011, 2013), and Jeppesen (1966) have been important historical sources to understand the Danish plantation system in Ghana. These sources have been primarily based on information from Danish archives, eyewitness accounts and secondary accounts. These deal with historical backgrounds and descriptions of the various Danish plantations.

The archaeological sources mainly comprise survey and excavations. Jeppesen's (1966) survey of former Danish plantations gives a vivid description of the sizes and the history of these plantations. Archaeological excavations have been carried out at four of the plantations. The first plantation excavations were carried out at Daccubie plantation. DeCorse (1993) reveals that Daccubie plantation was the biggest and the most successful of all the Danish plantations in Ghana. Excavations conducted by Bredwa-Mensah (2002, 1996a) at Frederiksgave plantation and Bibaise plantation respectfully were the most extensive archaeological excavations to understand plantation life of both the Danish planters and the enslaved African workers. Boachie-Ansah's (2007b) excavation at a Danish plantation site at Brockman was another attempt to understand plantation archaeology in Ghana. In this regard, the excavation at Brockman plantation revealed occupational deposits that cannot be ascribed to the Danish planters nor the enslaved workers although the masonry ruins were Danish. This is an attempt to see plantation landscapes as places where different occupational phases can be observed.

5.3 Surface Survey in the Dodowa Valley

The Dodowa Valley is formed by the Dodowa River in the rugged mountainous area north-east of Accra and north of the town of Dodowa. The valley stretches north-south following the meandering course of the Dodowa River which takes its source from the far interior bush of the Akuapem Mountains (Figure 5.1).

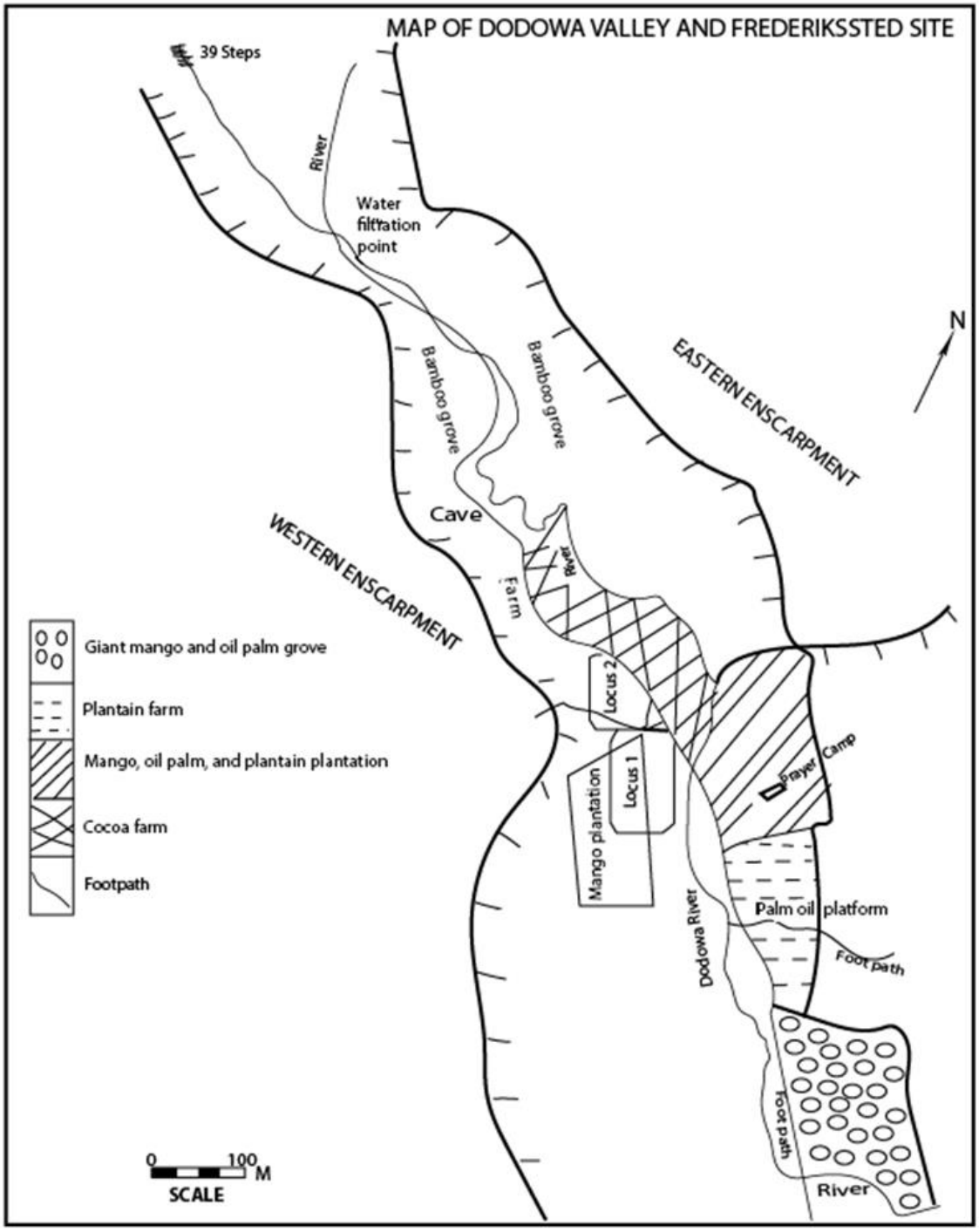

Figure 5.1: Map of Dodowa valley and the research area

The Dodowa River, from which Dodowa town derives its name, rises in the northern part of the Akuapem Mountain and then descends about 50 km through the rugged and constricted Dodowa Valley before debouching onto the Accra plains through Dodowa town. The valley is densely forested, with bamboo, giant mango trees and variants of shrubby vegetation. The forest covers most of its expanse with occasional pockets of savannah vegetation where water is scarce. The east-west escarpment is deeply jagged, probably having been carved up by the watercourse over millions of years.

Other natural features in the valley include waterfalls and springs that have added to the natural attractiveness of the valley. The historic trade route that served as the main artery of trade between communities on the Akuapem Mountains and Dodowa can still be seen today but local farmers mainly used it to access their farms. The track, which is now a footpath, goes south to north, meanders along and around the Dodowa River and winds through groves of bamboo and native bushland. The path also provided direct access from Dodowa Lower Town to Frederikssted Plantation. The study of the Dodowa Valley region covers all aspects of the natural, political, economic, and cultural landscapes that played out during the era of the Danes in the eighteenth and nineteenth centuries.

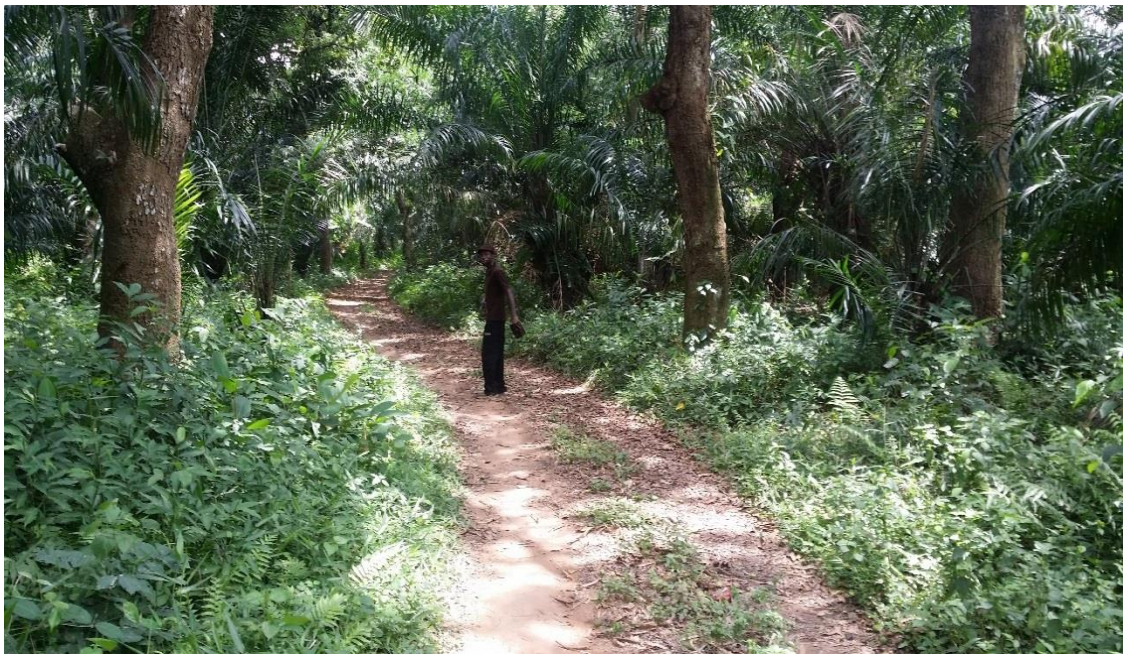

Figure 5.2: The historic footpath/trade route that connected Akuapem Mountains and Dodowa

The survey, which was the first of its kind in the valley, was meant to evaluate the biophysical and socio-cultural systems of the Frederikssted landscape to reveal where specific land uses may best be practiced in the Dodowa Valley. Identifying the actual

evidence of land use in the archaeological record in the Dodowa Valley has not been a very difficult task. There are material remains such as the extant Frederikssted stone ruins, a cave, a colonial water filtration point, a palm oil processing site, giant mango grove, various agricultural tools and implements, as well as plant and animal remains, all of which have successfully been identified by means of archaeological fieldwork (see Chapter 6).

Further walk survey was pursued to systematically locate more contemporaneous sites related to the plantation house. The survey was undertaken in clear weather/visibility. Even though it was a sunny day, tall vegetative cover of the valley formed a canopy, which shielded much of the sunshine. Five research staff were engaged in the exercise, which lasted for 3 hours. The survey covered an area of about 1.5 kilometres from south to north and about 1km long from east to west, traversing both the eastern and the western escarpments of the valley, and the features that were found were recorded with GPS, (see figure 5.1)

A B

Figure 5.3: Former palm oil processing platforms

This area was chosen for the purpose of the survey because it was believed to be the catchment area of the entire Frederikssted plantation landscape. The survey led to the discovery of a palm oil processing point in the Dodowa valley located in a giant mango grove along the historic footpath that runs through the valley (Figure 5.3A). This is a circular concrete feature of about 2 meters in diameter which also has a gully of 10cm deep running through the center from south to north. A similar structure (Figure 5.3B) was again discovered in one of the former United African Company (UAC) warehouses in Dodowa (Lower) town. These were used to process palm oil probably in the nineteenth

century during the post-plantation phase, and when there was a boom in palm oil trade in Dodowa.

Also later a chunk of concrete staircase which had collapsed into the bank of the Dodowa River was also discovered through the survey about 100m south of the Frederikssted building. A cave (Figure 5.4) is located about 150m north of Frederikssted plantation house along the main footpath in close proximity to the Dodowa River. In fact, it is not immediately known whether the cave served as resting point or habitation for humans in the valley.

A water filtration point (Figure 5.5) believed to have been constructed by the Danish plantation owners is also located along the Dodowa River about 600m north of Frederikssted. The structure, which is about 60cm high, was constructed with stone blocks similar to those used in the construction of the main Frederikssted building. It is strongly believed that it was made by the Danes and existed during the plantation era. Initially there were charcoal inserts in the structure meant to purify the water that was emerging from underground. This served as a source of drinking water for the Danish plantation owners and later served the numerous traders who plied the route. These are the elements that form the ensemble of the Dodowa valley landscape. However, archaeological excavations were carried out only at the Frederikssted plantation building due to time constraint.

Figure 5.4: Entrance to the cave in the valley

Figure 5.5: The water filtration structure

Challenges of the survey

The reconnaissance survey failed to locate some contemporaneous sites related to the plantation house. This is because other facilities mentioned by Jeppesen (1966, p. 52) such as saw-mill, granary and the slave quarters which were believed to have been attached to the Frederikssted plantation could not be traced during the survey. The thick impenetrable jungle at some sections of the valley impeded effective walk survey. Moreover, continuous farming activities in other parts of valley may have obliterated the locations of these facilities. Material culture from slave quarters would have shed more light on slave life-ways such as food-ways, clothing, worldviews and working conditions. Similarly, materials from the saw-mill and the granary would have provided more information about plantation life. Maybe further survey and excavations in the near future can lead to their discovery.

5.4 Oral Tradition

The use of oral traditions is seen as representing methodological innovation that reflects the cultural attitudes of Africans about their own history and has led to an archaeology that is increasingly sensitive to questions of an African historical identity free from the Western structure of thought (Schmidt 1983, p. 62). Particularly the history of Sub-Saharan Africa has been preserved predominantly through oral traditions (Henige 1971, p. 372). According to Echo-Hawk (2000, p. 267) the study of oral literature as history features two central sub-divisions: *oral history* and *oral traditions*. Oral history is defined as verbal memoirs of firsthand observers who witnessed or were part of an event, while

oral tradition is verbal information that firsthand eyewitnesses have passed on to others that has become traditions. This involves hearsay transmission from an original witness through a string of witnesses to the present narrator (Mercer 1979, p. 130). In those areas of the world inhabited by people who had no writing, oral tradition is the foremost available source for reconstruction of the past and even among people who have writing, many historical sources including the most ancient are based on oral traditions (Fennegan 1974, p. 58; Vansina 2006, p. 1). Schmidt and Walz (2007, p. 53) argue that historical archaeologists need to listen to local histories, often held in oral systems, and that the appropriate task of historical archaeology is making histories that include local historicity. A critical historical archaeology in Africa is demonstrated by cases in which oral traditions play a principal role in unveiling the historical significance of archaeological remains (Posnansky & DeCorse 1986, p. 2, DeCorse 1996). In most African situations, oral traditions have come to be known as playing significant roles in local representations of history through royals and leaders as well as commoners articulating contending views (Schmidt 1978; Stahl 1994).

As part of her contribution to this field of scholarship Stahl (1994, 2004) argues, for example, that "the lived past" can be accessed or envisioned from archaeological materials and other sources. This draws on oral historical, archival, and archaeological sources to understand how daily life was lived. In the view of Campbell (2006, p. 73), the sway of early European narratives that described and defined African societies has also lastingly marked the methods, norms and forms of narrative writing used by contemporary social science. However, there is a New African Historiography (Vansina 1994). A new climate of urgency pervaded African historiography in the 1950s and grew to pre-eminence in the 1960s. This has led to the development of a revolution in new historical practice and new African history (White et al. 2001, p. 12). This new African historiography largely combines oral-historical narratives with the archival and archaeological sources to better understand both the archival and the archaeological data.

Oral tradition provides a viable source of information about historical settings dating far back into time. Oral accounts serve as important adjuncts to archaeological and documentary records and can illuminate certain historical processes (Brown 1973, p. 347; Echo-Hawk 2000, p. 274; Vansina 1971, p. 458). In the view of Brown (1973, p. 352), oral tradition can be used to show how space was used and how structures were altered

in historic times. Oral tradition has been used to locate sites of archaeological interest (Schmidt 1990, p. 252). It also serves as an interpretative and explanatory device in history (Schmidt 1983, p. 68) as well as validating migration history in many African societies (Campbell 2006:75). This led Vansina (1965, p. 67) to suggest inter-disciplinary approach that used archaeology, oral traditions, and other ethnographic data in African history.

The oral interviews were carried out based on the approval granted by La Trobe University's Human Ethics Committee as the interviews conformed to the *National Statement on Ethical Conduct in Human Research*. The application/ approval number was **2077-14.**

Oral accounts that I collected from Dodowa were meant to contribute new information to complement the archaeological and documentary records about Danish colonial administration and the plantation system in Dodowa. Interviews were mostly conducted at Lower Dodowa where the presence of the Danish encounter is still felt. A total of nine inhabitants of Lower Dodowa were interviewed. The respondents comprised seven men and two women all aged between 52 and 81 years. These people comprise the elite and living descendants of both Danish and indigenous traders who lived at Lower Dodowa where a different system of economy and different social class became established as a result of their involvement in the plantation mercantile system that existed in Dodowa.

The questions were centred on their knowledge about the Danish plantation system and its aftereffects in Dodowa. Answers were recorded in individual interview guides. However, in certain circumstances I could not write the answers down because two of the respondents were interviewed on their farms where writing was very difficult. One respondent was also about to travel at the time I arrived for the interview. The interview was therefore carried out in an informal conversational form. The audio recorder was thus helpful as it was used to record the answers in all cases which were later transcribed.

It came to light from the interviews that of all the people who were interviewed, none had knowledge of the presence of Frederikssted plantation in Dodowa. However, they could remember walking past the ruins of the stone block structure but never realised it used to be Frederikssted plantation house. However, they reminisced about the presence of several Europeans and their businesses including some Danish nationals engaged in brisk

businesses of buying slaves as well as legitimate goods with Dodowa as the nerve centre during the nineteenth and the early twentieth centuries. Historical documentations about Danish plantations in Ghana have therefore been useful in locating Frederikssted plantation against the backdrop of the weakness of the oral accounts. The lack of oral traditions about Frederikssted plantation shows disconnection between the modern community and the plantation period. This points to mobility of people and likely movement of the plantation residents away from the area. Dodowa was much populated by Akuapem people, some of whom established merchandise outlets in Lower Dodowa. Some most likely reoccupied the Frederikssted plantation site during the post-plantation period beginning from 1802 when Frederikssted plantation was closed. However, none of the respondents remembers the African occupation at Frederikssted, though some do remember walking past the ruins to their farms.

Even though the Danes were the first Europeans to have a long-term stay in Dodowa, their departure in 1850 brought about significant social transformation in Dodowa. The Lower Dodowa suburb became the centre of trading activities of other European multinational companies such as the United African Company (UAC) associated with the British, Union Trading Company (UTC), which was associated with the Basel Mission in Ghana (Buser 2009, p. ix) and Ghana National Trading Company (GNTC). These companies until late the twentieth century established a number of shopping centres selling European material and exporting local materials to Europe. The shops and the warehouses were later bought by indigenous Dodowa people who used them as houses. Most of the houses can still be seen in present day Dodowa.

5.5 Archaeological Excavations

Since excavation is the foremost means by which the archaeologist collects data from beneath the ground about the past, the fieldwork encompassed excavations of 18th-century plantation settlement sites inhabited by diverse residents, including plantation owners, enslaved African fieldworkers and probably *free* inhabitants in later periods. The site map (Figure 5.7) has been sectioned into two: *Locus 1* and *Locus 2*. Accordingly, the archaeological data that have been considered as part of this dissertation were those excavated in 2012 and 2013 field school seasons at the main plantation building area (*Locus 1*), as well as materials excavated in 2015 at the immediate north (*Locus 2*) of the Frederikssted plantation building. I describe the excavation procedures that I followed

and present stratgraphic drawings of the various units that were excavated. In all the excavated units, provenance was achieved by digging *arbitrary levels* of 10cm intervals to describe each level. The main excavation tools that were employed in the digging were trowels, handpicks and in few occasions pickaxe and mattock were used to remove hard soil and roots respectively. The excavated soil was sieved in ¼ inch mesh in order to identify artifact which were missed during the excavations process.

Locus 1 (main plantation building)

The main Frederikssted plantation building comprises a sequence of single rooms, laid out south to north. The building is accessed by a stair-step (about 1m high) that connects an apron (verandah) at the eastern (main) entrance. The apron was made of red earth with the upper surface paved with stone slabs. However, the entire upper surface has deteriorated exposing only the red earth in most parts of the surface. The apron, which is about 1 meter high, stretches abut 40m south-north. Archaeological investigations have revealed four rooms of varied sizes.

Figure 5.6: Ruins of Frederikssted plantation house, 2015

However, more rooms were believed to be extending northwards where excavations were carried out in 2015. Remnants of the stone house believed to be the plantation owners' house consists of a wall built in dressed sandstone. This is because the nearby Akuampem Mountain is formed by sandstone rocks (Kesse 1985) which the enslaved African workers quarried to build the plantation house. The northern wall measures about 2.40m high and 40cm thick while the southern wall measures about 2.50m high and 40cm thick. Both the exterior and interior walls consist of brown mud sealant and unplastered cut-stone blocks. At the extreme northern end of the building, the walls still bear traces of whitewashed

plaster on both faces. Both the eastern and the western walls have crumbled as a result of natural and human activities.

Locus 1 excavations

The Locus 1 excavations were undertaken between 2011 and 2013 during field school sessions, and in all seven units were excavated during these years.

Unit 1

In January 2011, the work mainly comprised clearing of the thick vegetation that had covered the entire plantation building. After the initial bush clearing, one excavation unit was excavated at the frontage of the building. This unit measured 2×3 meters and was dug to a depth of 40cm deep. The entire trench was characterized by stone rubble, and no artefacts were retrieved.

Units 2 and 3

During the 2012 field school two additional trenches were excavated at the rear of the building, behind the west wall. Both Unit 2 and Unit 3 comprised 2×2 meters and they were dug to a depth of 40cm deep. Some of the artefacts that were recovered were local pottery materials, European ceramics, glass fragments, nails, metal objects, and smoking pipes (local and foreign).

Units 4, 5, 6, and 7

During the 2013 field school season similar materials were obtained from the four units that were excavated. *Unit 4* was also sited behind the western wall of the main plantation building. Its extent was 2×2 meters and it reached sterile level at the depth of 40cm. Local pottery, European pottery, metal and blue beads were retrieved from the various levels of the trench. Units 5 and Unit 6 were excavated in one of the rooms of the main building toward the north. Even though that section of the building has no standing walls, the foundations are still visible. Unit 5 and 6 had the same size of 2×2 meters and 40cm deep. Unit 7 was dug at the frontage of the main building near the east wall. Its size also measured 2×2 meters, and it was dug to 40cm deep. Materials recovered from these units mainly comprised local pottery, European pottery and metals.

Materials recovered from these earlier excavations were not analyzed beyond the initial cataloguing, and they will be analyzed together with those excavated in 2015. This is because materials from both loci have been identified as part of the general material culture associated with the various occupational phases of the Frederikssted plantation. However, a limited field report by Abrampah and Apaak (2013), covering the various field schools, has been submitted to the University of Ghana, which has been funding the field schools.

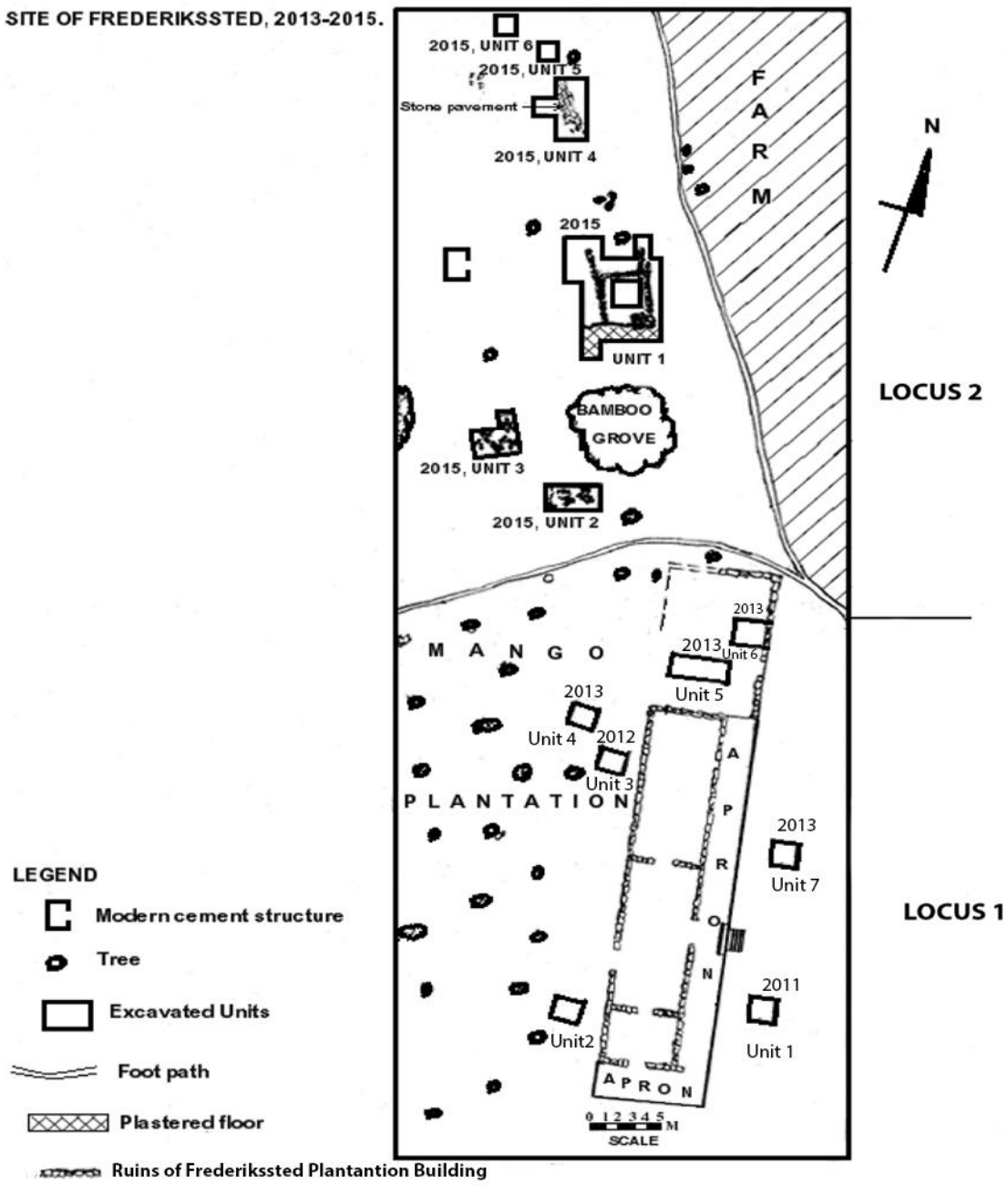

Figure 5.7: Site map of Frederikssted plantation excavations (Locus 1 and Locus 2)

Unit 1

Unit 1 was laid out on the second mound in the series, and began as a 2m×2m trench but was subsequently expanded to cover an area of about 6m west-east and 12m south-north. The greater amount of archaeological materials in the 2015 excavations was obtained from Unit 1. There were two significant features that were encountered in Unit 1. The trench was characterised by a stone foundation (made of sandstone quarried from nearby mountains) that rans through the entire length and breadth of the unit. The foundation, which was found in both the west and the east walls, comprised roughly cut stones that were incorporated into earth mortar and stood about thirty centimeters high. Beneath the stone foundation at Level 3 (30cm to 100cm of the north wall) was another feature, most likely a refuse dump where significant amounts of materials such as European ceramics, beads, bead molds, glass material and metal objects were retrieved. At the depth of 120cm, the north section reached sterile level where no more cultural materials were retrieved.

Other architectural evidence from Unit 1 excavations at Locus 2 was revealed at the depth of about 40cm deep in the southern section of the trench. Here a white painted smooth and compact floor was uncovered. The whitish layer/floor, which was about a millimeter thick, appeared about forty centimeters beneath the surface, and seemed likely to have been associated with the stone foundation, which also postdates the refuse pit. The white layer might have served as a room floor to the stone foundation, which also had mud walls. Further digging through the plastered floor, however, revealed no artefacts. This may suggest that the stone foundation, which crisscrosses Unit 1, was a habitable structure made up of sleeping rooms and living rooms. Unit 1, which began as a 2×2m trench, ended up as a 6×12m trench due to the concentration of artefacts which warranted a number of extensions. The stratigraphic sequence of the excavated units was observed and drawn based on differentiations in soil colour. It was observed that layers of ash and charcoal as well as loose, dark and brown sandy and lateritic soils were mixed with cultural materials, and occurred in almost all sections of the profile of Unit 1.

The top soil invariably was loose dark humus soil that supported plant growth. There were, therefore, many root hairs especially that emanated from the bamboo grove. Level 2 displayed a compact brown clayey soil which also contained deposits of different artefacts as well as a stone foundation which ran through the trench. The stone foundation

stretched to the end of level 3 where the compact soil gave way to relatively loose ashy soil with charcoal in Level 4. Level 4 through to level 8 at the northern section gave the impression of a refuse pit where household thrash was dumped. A host of artefacts such as metal hoops, beads, slate pencils, imported ceramics, glass materials, and local pottery were retrieved from the loose ashy soil of level 3 and beneath. Fresh and rotten roots as well as roots of a palm tree which was removed all ran through the trench.

The south wall, which was much closer to the bamboo grove, had more bamboo root hairs appearing at the uppermost layer. The brown clayey soil was more compact with few cultural materials. The white plastered floor, which was uncovered at a depth of 10cm deep (above the stone foundation) at the southern section, was reminiscent of a sleeping room floor. This further suggests that the mound on which Unit 1 was established is a house mound, built in vernacular architecture of exclusively mud and roofed with thatch. The mounds were formed after the collapse of the building. It must be mentioned that Locus 2 shows a different architectural style from Locus 1. The general trend in architectural style at Locus 2 shows that the buildings were built with mud with stone foundations (as can be observed in Unit 1, Locus 2). Excavations at Unit 1 reveal an episode of abandonment and reoccupation culminating in the accumulation of the house mounds at Locus 2, which were left as durable traces and archaeologically visible.

Arbitrary level	Occupational level
Level 1	Abandonment (mound)
Level 2	Stone foundation
Level 3	Stone foundation
Level 4 to level 8	Refuse pit

Table 5.1: Occupational levels of Unit 1, Locus 2

Figure 5.8: Excavations underway in Unit 1, Locus 2

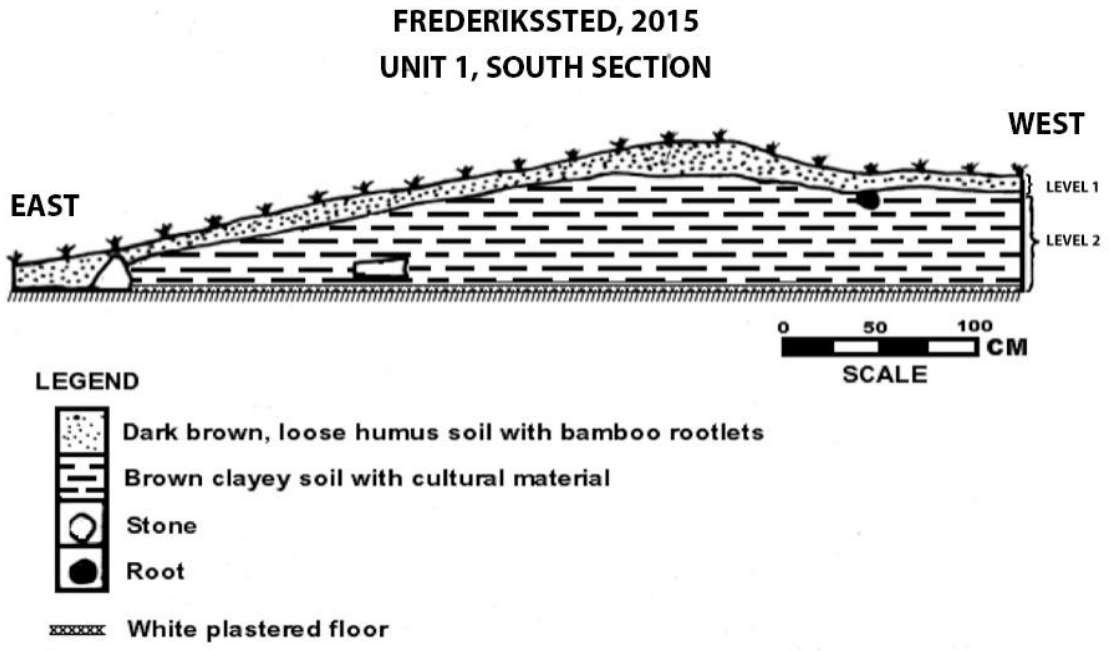

Figure 5.9: Profile of Unit 1, south section (Locus 2)

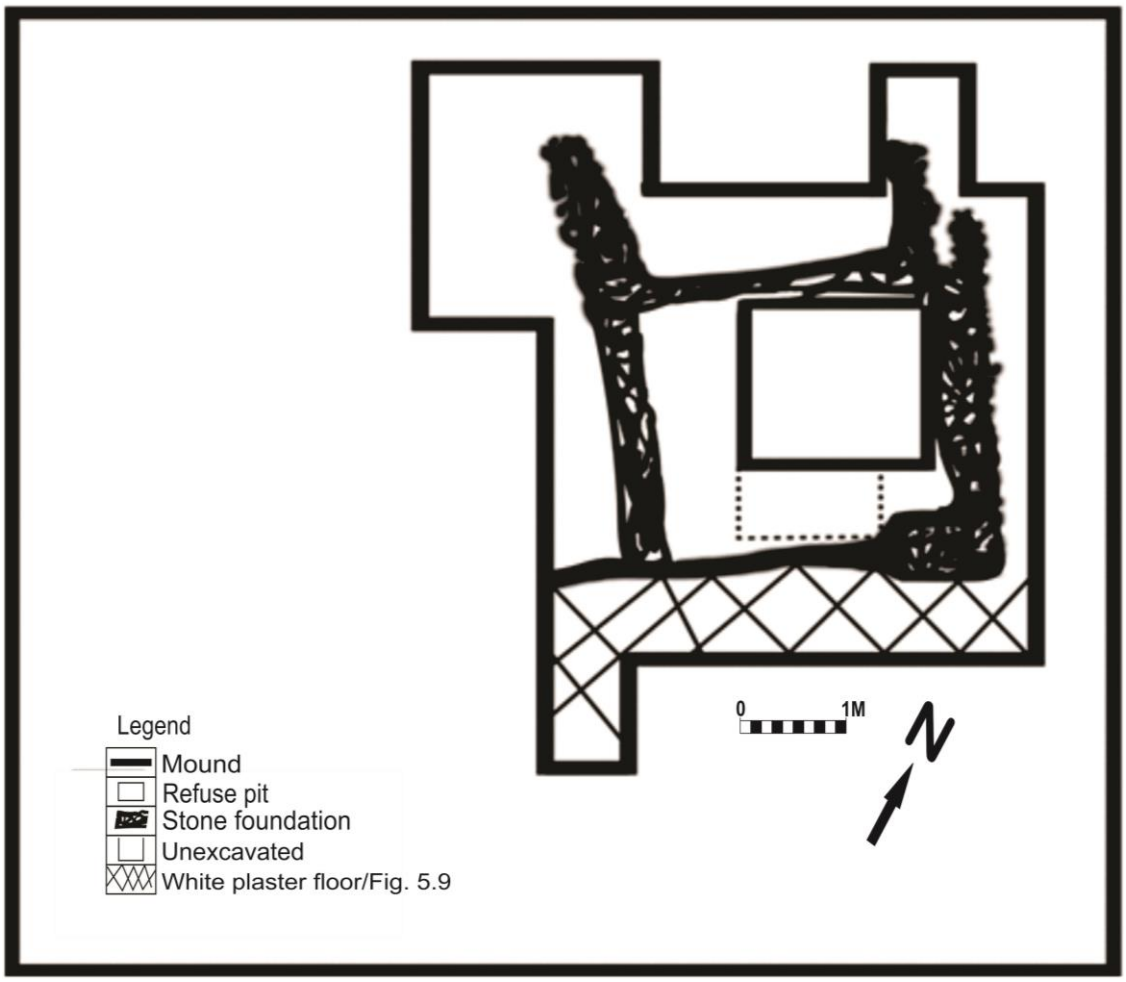

Figure 5.10: Plan of Unit 1 at Locus 2, showing depositional pattern

Figure 5.11: Unit 1, Locus 2

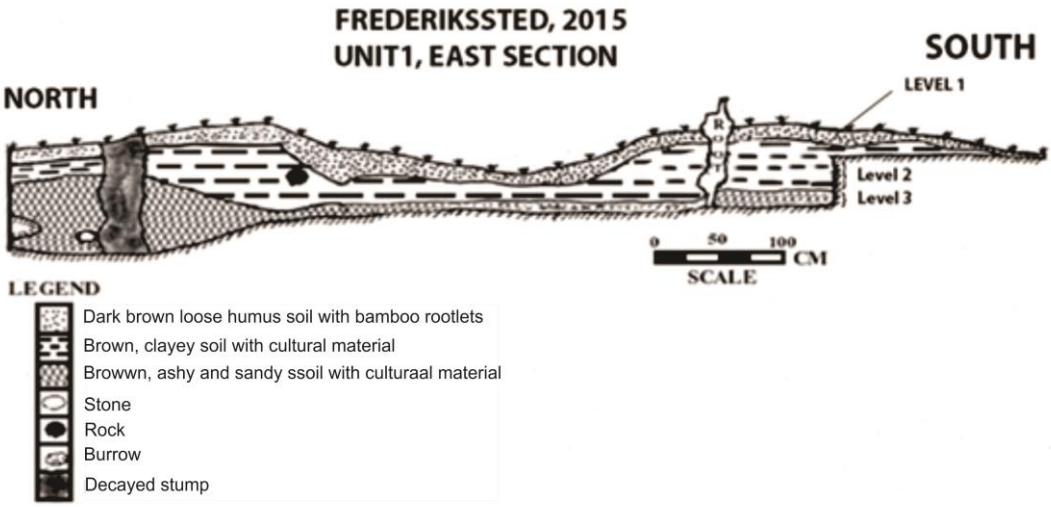

Figure 5.12: Profile of Unit 1, east wall (Locus 2)

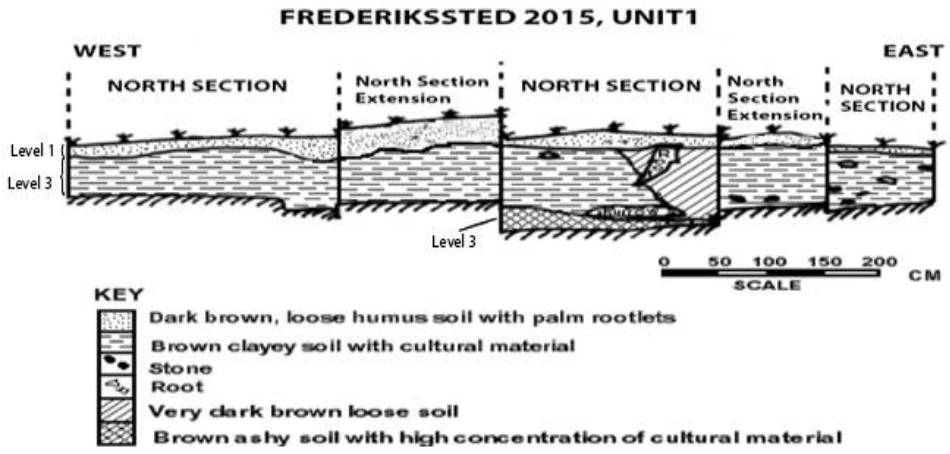

Figure 5.13: Profile of North section of Unit 1, Locus 2

Figure 5.14: Barrel hoops exposed in-situ in Unit 1, Locus 2

Unit 2

The expanse of Unit 2 (also located on a mound) was 2m×5m and it was dug to the depth of 1 metre deep. The provenance was achieved by digging *arbitrary levels* of 10cm intervals to record each level. Stone intrusions which are believed to be building foundations and metallic objects such as barrel hoops, nails, corroded gong (two-tier metallic object, musical instrument probably) and local pottery were some of the materials recovered in this unit. The stratigraphy of the southern wall, which represents the unit, consist of 2 levels which contained some cultural materials. The first level consisted of dark brown humus soil of about 40cm thick. There were a lot of rootlets and bamboo root hairs in this level. The first level was underlain by a second level of brown clay soil where artefacts were recovered. However, the west end of the second level was characterised by stone rubble believed to have been part of stone foundation similar to those encountered in Unit 1. Artefacts were thus not found below the stone wall. All artefacts from Unit 2 are associated with later local occupation.

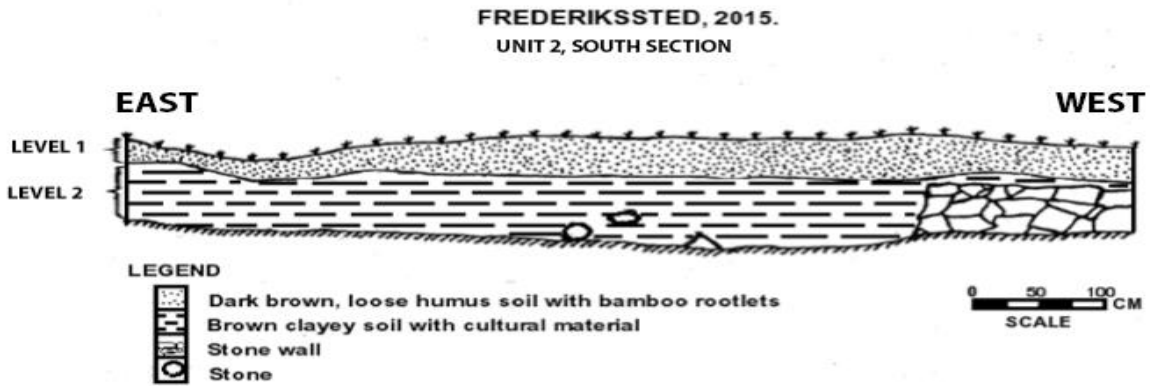

Figure 5.15: Profile of Unit 2, south section (Locus 2)

Unit 3

Unit 3, located at the western side, was laid outside the mound area and comprised a trench of 2×3m, but at the depth of about 50cm deep naturally laid stone intrusions were encountered which made further digging extremely difficult. Few artefacts such as local pottery and metal objects were recovered. The profile of the south wall was marked by 3 levels. The topmost level was characterized by dark brown humus soil with rootlets and bamboo root hairs. At this level, no cultural materials were found. Beneath the humus soil of level 1 was level 2 with brown clayey soil where few artefacts were found. Level 3 was more gravelly in brown soil that had no artefacts. Stone rubble, which constituted the

natural bedrock, was also encountered at this level, which made further excavations almost impossible.

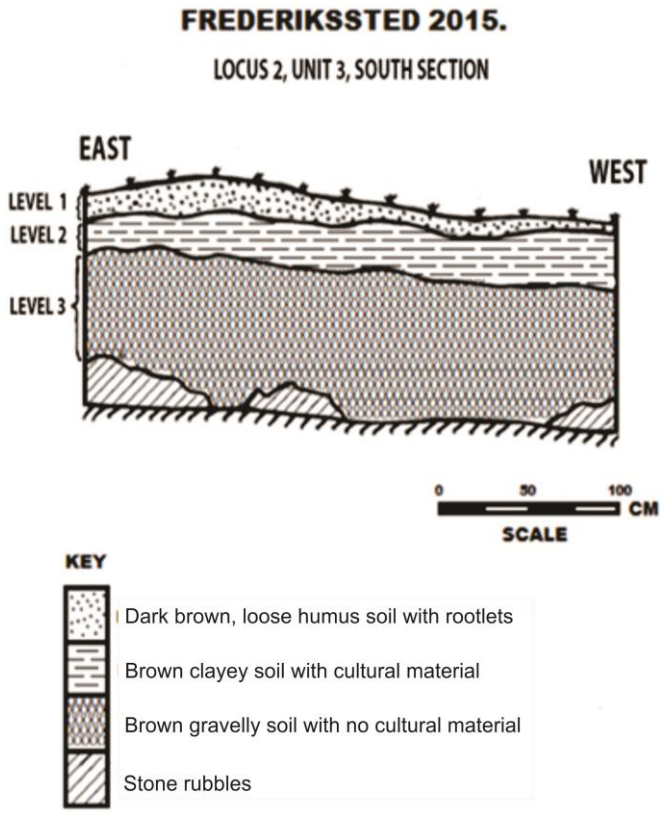

Figure 5.16: Profile of Unit 3, south section (Locus 2)

Unit 4

Unit 4 was established at the northern section of the site and was meant to trace and determine the continuation of the feature (stone foundation) uncovered in Unit 1. However, Unit 4, which measured 4m×2m, revealed a stone platform in the middle of the trench. The feature which is reminiscent of a floor of a porch or paved walkway was oriented south-north. It was constructed with flat stone slabs also quarried from the nearby escarpment. The stone slabs were hand-cut, irregular in shape, and they were laid in a random pattern and cemented with whitewashed plaster or sealant. The length, which stretches south-north, measured about 4 meters long while the width measured 50cm wide. It seemed to have been part of the architectural remains encountered at Unit 1. Artefacts were mainly retrieved from Level 2, and at the depth of about 40cm, there were no more artefacts. We therefore extended the north section by 2m to cover more surface area of the mound. Unit 4 has a stratigraphy that comprises 2 levels. The first level was

made up of a mixture of dark brown together with humus soil and rootlets. This was underlain by level 2 characterized by compact brown loamy soil.

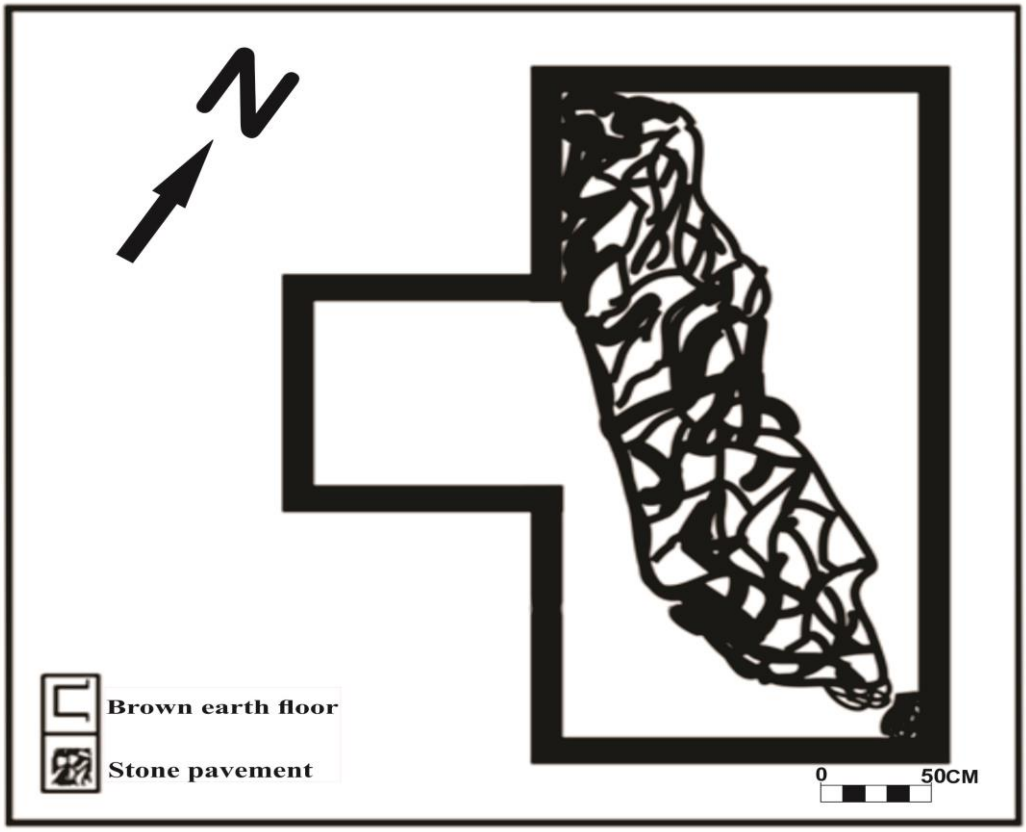

Figure 5.17: Drawing of the paved floor at Unit 4

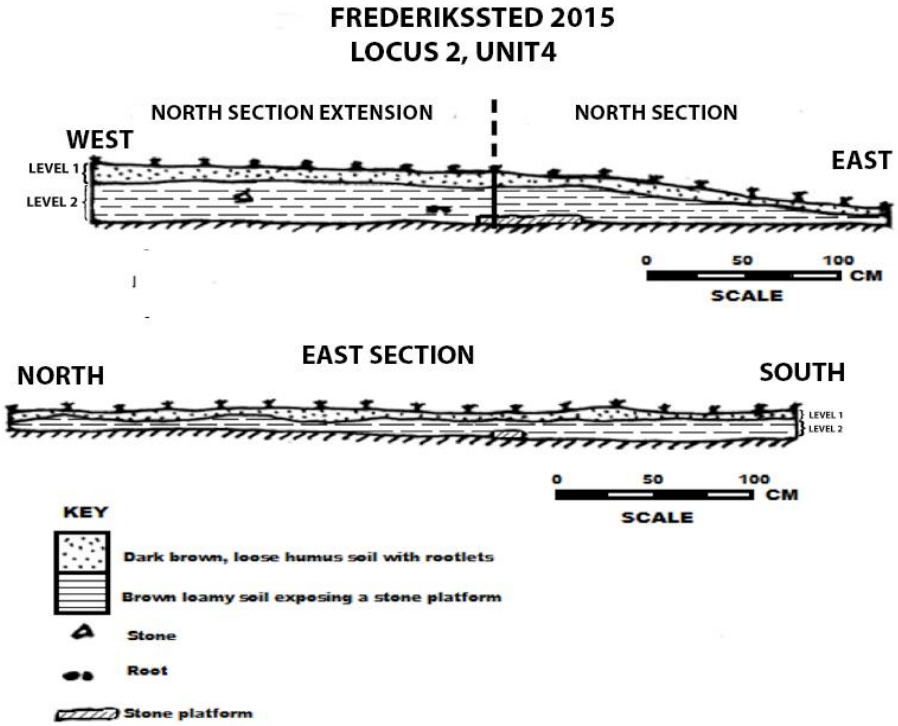

Figure 5.18: Profile of Unit 4, north and east sections (Locus 2)

Unit 5

In Unit 5, which had the size of 2m×2m, no features were encountered but a few artefacts like local pottery and nails were retrieved. Unit 5 reached sterile level at the depth of 40cm deep. In terms of stratigraphy 3 levels of soil colour differentiations were observed. The first level had dark brown and loose humus soil and rootlets. No cultural materials were found in the level. Level 2 was more of compact brown clayey soil where artefacts were obtained. Level 3, which had no artifacts, was made up of compact brown clay with gravels.

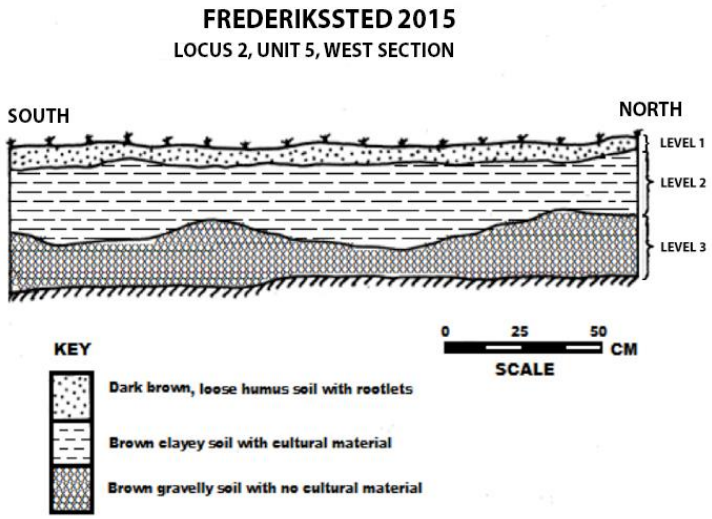

Figure 5.19: Profile of Unit 5, west section (Locus 2)

Unit 6

Unit 6 had the size of 2m×2m; no features were encountered, but a few artefacts in the form of local pottery and nails were retrieved. The unit also reached sterile level at the depth of 40cm deep. The stratigraphy of the north section, which represents the unit, comprises 3 levels. The first level consisted of dark brown humus soil with rootlets. Level 2 showed brown clay soil where artefacts were found. Level 3 was characterized by brown gravelly soil and was deemed sterile because no artefacts were found at this level.

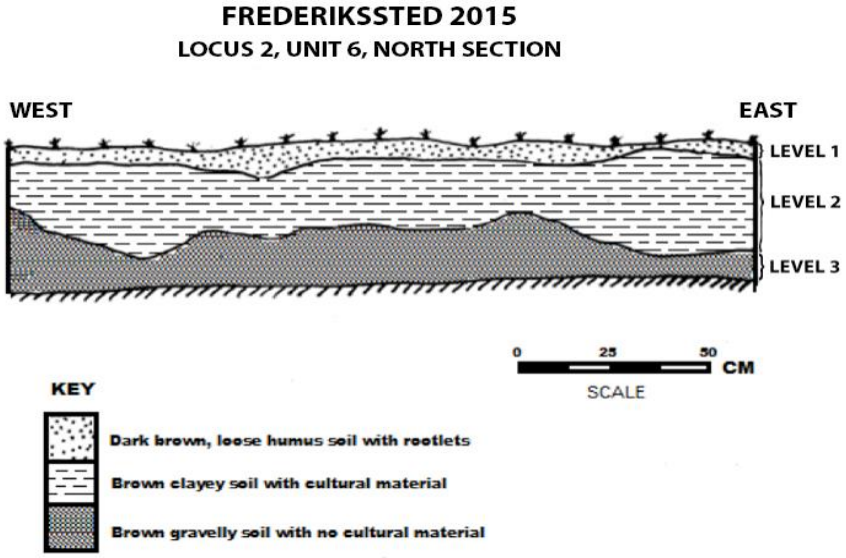

Figure 5.20: Profile of Unit 6, north section (Locus 2)

5.5.1: Analyses and Curation

In the period immediately after the excavations, from February 16th to April 30th 2015, I proceeded with the analyses of the artefacts and the ecofacts obtained from the excavations. Excavated classes of the finds include glass, local pottery**,** European ceramics**,** local and imported beads**,** bead moulds and polishers, faunal remains**,** metals**,** cowry shells, slate and slate pencils. Cleaning and packaging of the materials were done on-site, immediately after excavation. Faunal remains were cleaned with a brush while the rest of the materials were washed in water to remove soil particles from them. Labelling and cataloguing were done at the Department of Archaeology of the University of Ghana where they are now stored. After the initial sorting of recovered faunal remains, I relied on the expertise of Mr Bossman Murray, a retired technician at the Department of Archaeology who has expertise in osteology and conservation, to undertake a more detailed analysis of represented species. Metal objects from the excavations were also cleaned and chemically treated to prevent corrosion.

5.5.2 Artefacts Classification

The excavated artefacts were first sorted into broad categories such as glass, local pottery**,** European ceramics**,** local and imported beads**,** bead moulds and polishers, faunal remains**,** metals**,** cowry shells, slate and slate pencils. This sorting was based on recurring types on

the basis of shared characteristics or attributes. In the process of classification, I employed a *formal* or *analytic* classification system. *Analytic* classification is a classification of one particular kind of object in which all of their regularly recurring variants are recognised (Adams 2001, p. 1962), thereby forming successive series of classes referring to different features of artefacts (Rouse 1960, p. 313). In this, each category was subdivided again into specified categories like surface attributes such as decoration and colour, shape attributes such as shape and dimensions, and technological attributes such as raw material and method of production. I classified the European ceramics according to this method, thus *creamware, pearlware, semi-porcelain, true porcelain* and *stoneware*. This method is important as it has the potential to determine origin of artefact and also to solve chronological problems (Adams and Adams 1991, p. 30). However, classification becomes problematic when artefacts with similar characteristics or attributes originate from different sources at different points in time. This is perhaps in tune with Binford's (1962, p. 217) suggestion that "material culture" is an embodiment of the structure of the total cultural system, and that explanations of differences and similarities between certain classes of material culture do not always reflect our presumptions.

I tried to avoid classification based on an artefact's function (especially regarding the European ceramics) because this cannot be explicitly determined. Again, in a situation where the artefact is found in secondary context as a result of reuse (this is a common practice in Africa) classification of artefacts based on function becomes unreliable. As the inhabitants of Dodowa became embroiled in the use of European materials, they most probably used some of these foreign materials for different functions. For example, the European punch bowl (Figure 6.16*A*) found in Dodowa might be used for local cuisine like *fufu* or *banku* rather than fruit punch. However, I used a *functional typology* method as well as *form* (jars and bowls) in classifying local pottery between bowls and jars. Ethnographic analogy suggests that bowls (wide mouth) and jars (narrow mouth) normally were/are used for separate functions. Based on this analogy, local pottery materials were classified according to the form and their presumptive functions.

The rest of the materials such as glass, metals, beads**,** bead moulds and polishers, cowry shells, slate and slate pencils were all assigned presumed functions base on ethnographic inference

Chapter 6

Frederikssted Material Culture

6.1 Introduction

The following analyses are based on materials recovered from archaeological excavations conducted at Frederikssted plantation site. In the materials analyses, I discuss the various categories of styles, historical background, and manufacturing process of the various artefacts. The interpretations of the material culture are discussed in Chapter 7, the next chapter. Materials analysed in this chapter comprise materials excavated at *Locus 1*(Frederikssted plantation main building) during previous field school sessions between 2011 and 2013 as well as 2015 excavations at the adjacent *Locus 2.*

The materials recovered from excavations at Frederikssted present both challenges and opportunities. Just as the Frederikssted material culture plays a complementary role to the limited written documents and oral accounts, there is also the challenge of clearly delineating slave material culture. However, the excavated data show the presence of both Europeans/Danish planters as well as materials related to Africa occupants. The material inventory from the Frederikssted excavations comprises the following class categorisations in the table below:

Local Material Culture

Local pottery
Local beads
Bead moulds
Locally made smoking pipes
Faunal remains

European Material Culture

European ceramics
Glass materials
Metals
European imported beads
European smoking pipes
Cowry shells
Slates and slate pencils
Personal items (buckle, coin, finger ring, and buttons)

Locus 1

Unit	Level	Local pottery	Local s.pipes	European ceramics	Glass	Metals	Imported beads	European s. Pipes	Buttons	Buckle	Finger ring	Gun cartridge	Coin	Total
Unit 2	Level 1	5				27								32
	Level 2	11		11	5	35						1		63
	Level 3	4	1	1	38	40		5						89
	Level 4	9		11	8	3		1						32
Unit 2 total		**29**	**1**	**23**	**51**	**105**		**6**				**1**		**216**
Unit 3	Level 1	7				19								26
	Level 2	4		2		41			1					48
	Level 3	8		8	17	39								72
	Level 4	8		10		7								25
Unit 3 total		**27**		**20**	**17**	**106**			**1**					**171**
Unit 4	Level 1	4				29					1		1	35
	Level 2	14	1			36								51
	Level 3	4		2		30	8							44
	Level 4				7				1	1				9
Unit 4 total		**22**	**1**	**2**	**7**	**95**	**8**		**1**	**1**	**1**		**1**	**139**
Unit 5	Level 1	4				6								10
	Level 2	5				23		2						30
	Level 3	16				31								47
	Level 4	5				5								10
Unit 5 total		**30**				**65**		**2**						**97**
Unit 6	Level 1	7				5								12
	Level 2	3				15								18
	Level 3	4				18								22
	Level 4	11				3								14
Unit 6 total		**25**				**41**								**66**
Unit 7	Level 1	1				5								6
	Level 2	10				9		2						21
	Level 3	6				2								8
	Level 4													0
Unit 7 total		**17**				**16**		**2**						**35**
Locus 1 total		**150**	**2**	**45**	**75**	**428**	**8**	**10**	**2**	**1**	**1**	**1**	**1**	**724**

Locus 2

Unit	Level	Local pottery	Local beads	Bead moulds	Cowry shells	Faunal remains	European ceramics	Glass	metals	Imported beads	European s.Pipes	Slate	Slate pencils	Buttons	Total
Unit 1	Level 1	39				6	10		19						74
	Level 2	57	15		3	2	44		49		4				174
	Level 3	85	33		4	49			41	13	2		4	6	237
	Level 4	77	26		2	55	2	62	54	20	4	3	4		313
	Level 5	308	42	15	5	625	168	98	36	13	2		8		1320
	Level 6	145	38	25	6	19	101		31	13	6		2		386
	Level 7	84	28	13	3	27				25	4	2	1		187
	Level 8		10	8		48				10			1		77
	Surface						2								2
Unit 1 total		**795**	**192**	**61**	**23**	**831**	**327**	**160**	**230**	**94**	**22**	**5**	**20**	**6**	**2766**
Unit 2	Level 1	7													7
	Level 2	7													7
	Level 3	7													7
	Level 4	5							1						6
Unit 2 total		**26**							**1**						**27**
Unit 3	Level 1	11													11
	Level 2	15													15
	Level 3														
	Level 2														
Unit 3 total		**26**													**26**
Unit 4	Level 1														
	Level 2	40													40
	Level 3														
	Level 4														
Unit 4 total		**40**													**40**
Unit 5	Level 1														
	Level 2														
	Level 3	6													6
	Level 4														
Unit 5 total		**6**													**6**
Unit 6	Level 3	24													24
Unit 6 total		**24**													**24**
Locus 2 total		**917**	**192**	**61**	**23**	**831**	**327**	**160**	**231**	**94**	**22**	**5**	**20**	**6**	**2889**

Sum total: Locus 1: 724 + Locus 2: 2889=3613

Table 6.1: Total artefact inventory by locus, units, and levels, Locus 1 and Locus 2

	Locus 1																			
	Unit	Local pottery	Local s.pipes	European ceramics	Glass	Metals	Local beads	Bead moulds	Imported beads	European s. Pipes	Buttons	Buckle	Finger ring	Cowry shells	Coin	Slate	Slate pencil	Gun cartridge	Faunal remains	Total
	Unit 2	29	1	23	51	102				6								1		**213**
	Unit 3	27		20	17	106					1									**171**
	Unit 4	22	1	2	7	95			8		1	1	1		1					**139**
	Unit 5	30				67				2										**99**
	Unit 6	25				41														**66**
	Unit 7	17				17				2										**35**
Locus 1 Total		**150**	**2**	**45**	**75**	**428**			**8**	**10**	**2**	**1**	**1**		**1**			**1**		**724**
	Locus 2																			
	Unit 1	795		327	160	230	192	61	94	22	6			23		5	20		831	**2766**
	Unit 2	26				1														**27**
	Unit 3	26																		**26**
	Unit 4	40																		**40**
	Unit 5	6																		**6**
	Unit 6	24																		**24**
Locus 2 Total		**917**		**327**	**160**	**231**	**192**	**61**	**94**	**22**	**6**			**23**		**5**	**20**		**831**	**2889**
Locus 1&2 Tot		**1067**	**2**	**372**	**235**	**659**	**192**	**61**	**102**	**32**	**8**	**1**	**1**	**23**	**1**	**5**	**20**	**1**	**831**	**3613**

Table 6.2: Total artefact inventory by locus and units, Locus 1 and 2

6.2: Local Materials

Local materials comprise material believed to have been manufactured in the Dodowa area or material of African origin. Materials classified as local materials from Frederikssted are local pottery, local beads, bead moulds, clay smoking pipes, cowrie shells and faunal remains.

Local materials				
Item	**Location**			
	Locus 1	**Locus 2**	**Total**	**MNI/MNV**
Local pottery	150	917	1067	47
Local smoking pipe	2		2	2
Local beads		192	192	192
Bead moulds		61	61	21
Faunal remains		831	831	312
Total	**152**	**2001**	**2153**	**574**

Table 6.3: Local materials

6.2.1. Local Pottery Materials

Pottery production in West Africa

The term "local pottery" used here means pottery made in Ghana or elsewhere in Africa. The pottery may not have been made in the Frederikssted area. It may have been imported from nearby Shai potting centres. West African ceramics have been described as low fired earthenware objects which serve a variety of purposes (Cardew 1958, p. 111; Gijanto 2014, p. 3). Most ceramics function as cooking, serving, and storage containers. They are also used as receptacles for water, medicine, oil, or grains. Ritual ceramics are also produced which may be similar in shape and design to those used for food-ways and other purposes. Excavations at other sites have revealed pots that contain stones, animal bones and botanical remains indicating their usage as ritual objects. Some of these ritual pots can also be found in shrines and burials as an appeasement to the deities and the dead respectively. In West Africa, ceramic products are made by hand (not thrown on the wheel) using clays obtained from the local environment. The mining of the clay takes place in various ways such as surface collection, digging from pit and sometimes from dry river beds. After procurement, the clay is tempered with materials such as chaff or

sand grog (mostly from old broken ceramics) to prevent the vessels from breaking or cracking during the firing process.

The methods used in shaping the vessels include slab, pound moulding, coiling, and moulding over existing pot (convex moulding). After the shaping of the pots is done, they are smoothed and allowed to dry until they become leather hard. It is at this stage that various finishing procedures are executed on the leather hard vessels. Some of the finishing techniques include red slipping, burnishing, smoothing, or painting of the surface of the vessel. In addition, different types of decorative elements are often impressed or carved into the exterior and sometimes the interior of the vessels. The most pervasive decorative patterns include rouletting (mostly by the use of corn cob), incisions, grooving, and stamping. In most West African countries, different ethnic groups are known to be associated with particular shapes and decorative techniques (Boachie-Ansah 2008a, 2007a; Gijanto 2014, p. 3). As part of the firing process, the completed pots are piled together and surrounded by wood fuel. The pots are fired in open-air firing where the vessels are packed within a rudimentary circular mud wall or circular trench so that the vessels come into direct contact with the fire source which can be wood, straw, dry palm sticks or any available material depending on the local environment.

Site	**Date**
Kintampo	400BP
Begho	1100 AD
Bonakire (was part of Begho enclave)	1100 AD
Hani (successor village to Begho)	1100-1800 AD
Shai (includes Dodowa)	101-200 AD

Table 6.4: Pottery making traditions in Ghana

The beginnings of the pottery tradition in Ghana perhaps date back into the ancient times possibly beyond historical reconstruction. However, the earliest archaeological evidence of the manufacture and use of pottery materials in Ghana has been ascribed to the *Kintampo complex.* The Kintampo complex is also the Late Stone Age (LSA) complex in West Africa that has witnessed the most intensive archaeological research (Anquandah 1993; D'Andrea & Casey 2002; Casey 1993, 2000, Davies 1962, 1980; Dombrowski 1980; Flight 1976; Stahl 1985, 1993). Available Radiocarbon dating suggests that the Kintampo complex had been in existence at least during the fourth millennium bp (Stahl 1985, p. 126; D'Andrea & Casey 2002, p. 148). Some of the prominent potting centres in Ghana that have attracted archaeological and ethnographic

studies are Begho area (Berns 2007; Crossland 1989; Posnansky 2004), Shai area including Dodowa (Anquandah 1986; Ozanne 1964, 1968), and Akan areas (Bellis 1987, 1972; Boachie-Ansah 2008a).

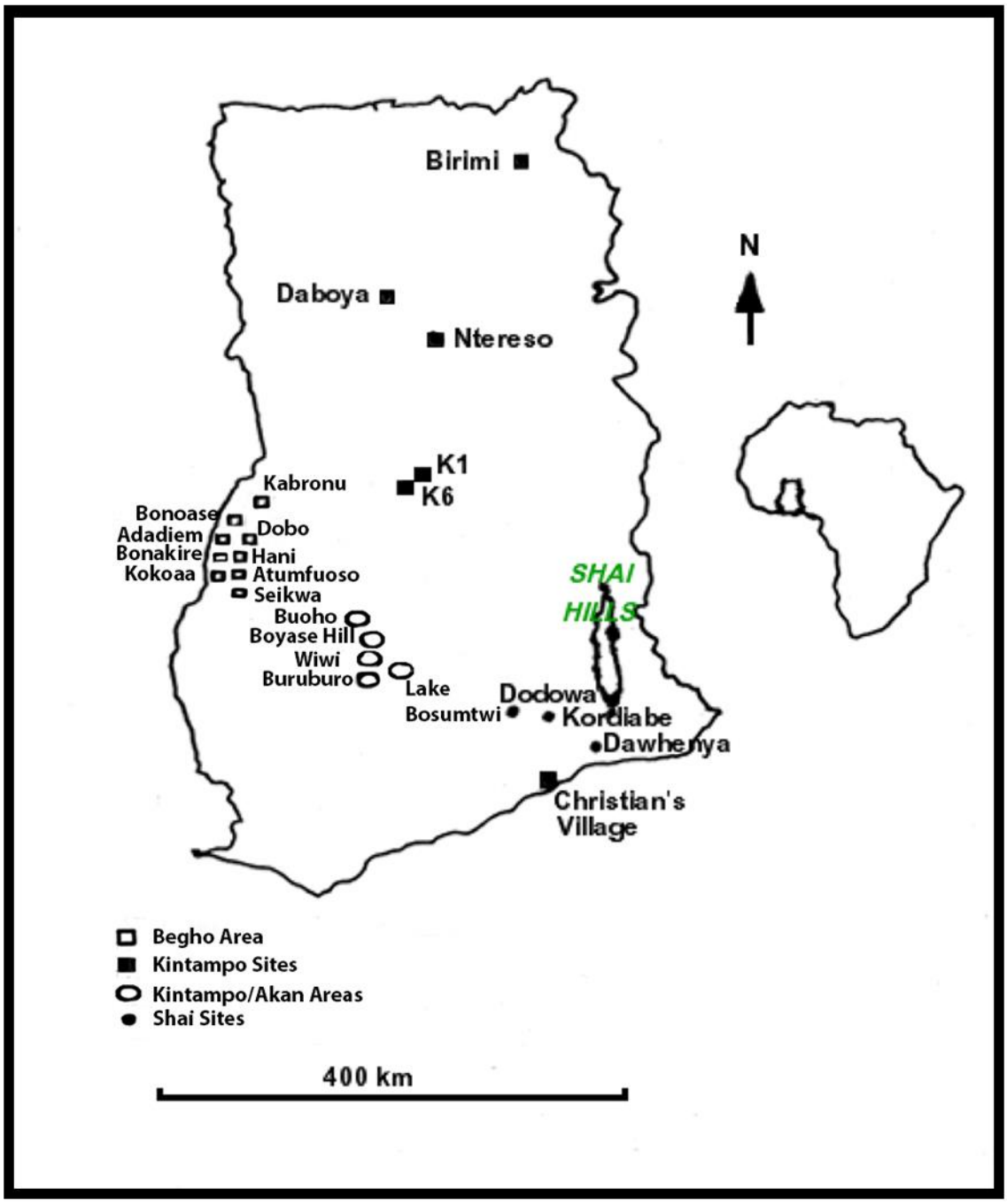

Figure 6.1: Early pottery sites in Ghana

6.2.1.1 Local Pottery from Frederikssted Plantation Site

Local pottery material constitutes the dominant finds from the excavations at Frederikssted. This consists of 1067 potsherds constituting 32% of total finds excavated (Table 6.1). One hundred and fifty (150) sherds were obtained from Locus 1 while 917 were excavated from Locus 2 (Table 6.3).

Locus 1							Locus 2						
Unit	**Level**	**Rim**	**Neck**	**Body**	**Base**	**Total**	**Unit**	**Level**	**Rim**	**Neck**	**Body**	**Base**	**Total**
Unit 2	Level 1			5		5	Unit 1	Level 1	15		24		39
	Level 2	8		3		11		Level 2	4	3	49	1	57
	Level 3			4		4		Level 3	10	7	68		85
	Level 4	6	2	1		9		Level 4	17	6	53	1	77
Total for Unit 2		**14**	**2**	**13**		**29**		Level 5	16	11	281		308
Unit 3	Level 1	1		6		7		Level 6	17	4	124		145
	Level 2			4		4		Level 7	38		46		84
	Level 3	5		3		8	**Total for Unit 1**		**117**	**31**	**645**	**2**	**795**
	Level 4	2	1	5		8	Unit 2	Level 1	1		6		7
Total for Unit 3		**8**	**1**	**18**		**27**		Level 2			7		7
Unit 4	Level 1			4		4		Level 3	1		6		7
	Level 2	9		5		14		Level 4	1		4		5
	Level 3		2	2		4	**Total for Unit 2**		**3**		**23**		**26**
	Level 4						Unit 3	Level 1			11		11
Total for Unit 4		**9**	**2**	**11**		**22**		Level 2	2		13		15
Unit 5	Level 1		1	3		4		Level 3					
	Level 2			5		5		Level 2					
	Level 3	8	1	7		16	**Total for Unit 3**		**2**		**24**		**26**
	Level 4			5		5	Unit 4	Level 1					
Total for Unit 5		**8**	**2**	**20**		**30**		Level 2	9		31		40
Unit 6	Level 1	3		4		7		Level 3					
	Level 2			3		3		Level 4					
	Level 3			4		4	**Total for Unit 4**		**9**		**31**		**40**
	Level 4	8		3		11	Unit 5	Level 1					
Total for Unit 6		**11**		**14**		**25**		Level 2					
Unit 7	Level 1			1		1		Level 3			6		6
	Level 2	6	3	1		10		Level 4					
	Level 3	3		3		6	**Total for Unit 5**				**6**		**6**
	Level 4						Unit 6	Level 3			24		24
Total for Unit 7		**9**	**3**	**5**		**17**	**Total for Unit 6**				**24**		**24**
Total for Locus 2		**59**	**10**	**81**		**150**	**Total for Locus 2**		**131**	**31**	**753**	**2**	**917**

Table 6.5: Distribution of local pottery assemblage at Locus 1 and Locus 2

6.2.1.2 Classification of the Local Pottery

Archaeological analyses of the Frederikssted local pottery have mainly been based on *formal typology* where similar patterns observed have been grouped together, thereby separating them from patterns from which they different . As the overall pottery materials from Frederikssted consist of all sherds (no full vessel), the classification centres on sherd portions (rim, neck, body and base), size, colour, decoration and other surface applications. The classification allows for recognition of types and patterns in the data so that each type/pattern would be treated as unique which will ultimately generate

information for the interpretation of the archaeological data. This is based on the existing convention of Ghanaian archaeologists (Bredwa-Mensah 2002, 1996a; Boachie-Ansah 2007b) dealing with slave plantations to examine local pottery in this manner so as to understand the technological and social connotation of African elements that existed on these slave/colonial plantations.

6.2.1.3 Sherd Portions or Formal Classification System

This comprises the description of the individual parts of the vessel such as rim, neck, base, handle, shoulder etc. The sherd portions that were obtained from Frederikssted have been classified as *rim, neck, body,* and *base*, with the *body* sherds forming the highest percentage (Table 6.5). Body sherds are the most predominant sherd type mainly because the spherical nature of the vessels produces many body sherds when the vessels are broken.

Measurement base classification

This type of classification defines types in terms of the ratios of the principal dimensions of the sherds (Orton & Hughes 2013, p. 192). In view of this, bowls have been identified as having a measurement that describes the maximum rim diameter as approximately equal to the maximum body diameter (Orton & Hughes 2013, p. 192; Crossland 1989, p. 28). Jars, on the other hand, generally have rims that are attached to comparatively narrow necks above the shoulders and their heights are more than the maximum body or rim diameter (Crossland 1989, p. 30). Since the pottery materials obtained from Frederikssted excavations mainly comprise sherd fragments, they were measured to determine the size of each sherd. Based on the measurements on their longest axis, 717 constituting 67% of the entire sherds were less than 3cm, while 350 (33%) were greater than 3cm. The diameter of the rims that were measured ranges from 13cm to 36cm (see Table 6.6).

Sherd fragment	Potsherd		
	Less than 3cm	Greater than 3cm	Sherd Total
Rim	98	92	190
Neck	19	22	41
Body	600	234	834
Base		2	2
Grand Total	717 (67%)	350 (33%)	1067 (100%)

Table 6.6: Potsherd size

Locus 1												
	Unit	Level	Rim diameter 13-36									
			13cm	14cm	16cm	20cm	23cm	26cm	28cm	31cm	32cm	36cm	Total
	2	2					5					3	8
		4		3		2					1		6
	3	3		4				2			2		8
	4	2	4		2				1		2		9
	5	3			4					3		1	8
	6	1			1		1					1	3
		4		3		3				2			8
	7	2		1		2			1		2		6
		3	1								2		3
Total for Locus 1			**5**	**11**	**7**	**7**	**6**	**2**	**2**	**5**	**9**	**5**	**59**
Locus 2													
	Unit 1	1	2	1		3				4	4	1	15
		2				1		2		1			4
		3			3	1		1		2	2	1	10
		4	4	1		3				2	4	3	17
		5	2	5		3	1				3	2	16
		6	3		2		3		1	1	4	3	17
		7		2	1		3	3		3	2	1	15
	2	1	3		2	4		3	2		3		17
		2		2			2	2		2	2	1	11
	4	3	1					3	1	1	3		9
Total for Locus 2			**15**	**11**	**8**	**15**	**9**	**14**	**4**	**16**	**27**	**12**	**131**

Table 6.7: Rim diameter (fragments) by locus, unit and level

Rim styles

The profile reconstruction of the sherds shows jars and bowls as the two main types of pottery obtained from Frederikssted plantation site. The rim sherds were used to identify two main functions that the sherds may have served; these are *bowls* and *jars* (see Table 6.8)

Bowls: Bowls are vessels of which the maximum rim diameter is approximately equal to the maximum body diameter (Crossland 1989, p. 28). One hundred and thirty-six (136) of the rims were identified as bowls because their shapes are round or ovoid and the rims are slightly everted or incurved, having either flat or rounded bases. Bowls are commonly shallow with the depth ranging from 5cm to 10cm (Crossland 1989, p. 28). Large bowls are usually used for storage of grains while the smaller ones are used in preparing and serving of food. Bowls from Frederikssted fell into two broad categories: everted rim forms (Bowl form 1) in which the rim flared outward from the point of constriction, and open hemispherical types (bowl form 2) with slightly incurved rims.

Bowl form 1: The first bowl form consists of 78 sherds with everted rim forms in which the rim flared outward. All the 78 sherds exhibit well burnished fabric which has become black with soot on the outside as a result of cooking. Their rim diameters range from 13cm to 34cm. This type of bowl was also commonly carinated at the shoulder area. The sherds are also characterised by multiple horizontal bands of grooves at the neck area between the carination and the rim. Two of the sherds had black painted lines at the inner

lips of the sherds. The carination and the black painted lines are the only decorative designs observed on this type of sherds. These carinated vessels are known to have Akan origin and they are known as *nkwasɛn* (soup bowls or vessels) and they are mainly used in preparing soup (Boachie-Ansah 2007a, p. 94).

			Form				
	Unit	Level	Bowl 1	Bowl 2	Jar 1	Jar 2	Total
Locus 1	2	2	8				8
		4		3	2	1	6
	Total for unit 2		**8**	**3**	**2**	**1**	**14**
	Unit 3	3	6		1	1	8
	Unit 4	2	5	2	2		9
	Unit 5	3	4	2	1	1	8
	Unit 6	1		3			3
		4	7	1			8
	Total for Unit 6		**7**	**4**			**11**
	Unit 7	2	3		3		6
		3		2	1		3
	Total for unit 7		**3**	**2**	**4**		**9**
Total for Locus 1			**33**	**13**	**10**	**3**	**59**
Locus 2	Unit 1	1	4	5	3	3	15
		2	2			2	4
		3	4	3	1	2	10
		4	6	4	4	3	17
		5	4	8	4		16
		6	8	5	3	1	17
		7	7	3	3	2	15
	Total for unit 1		**35**	**28**	**18**	**13**	**94**
	Unit 2	1	7	7	2	1	17
		2		8	3		11
	Total for Unit 2		**7**	**15**	**5**	**1**	**28**
	Unit 4	3	3	2	1	3	9
Total for Locus 2			**45**	**45**	**24**	**17**	**131**
Sum total			**78**	**58**	**34**	**20**	**190**

Table 6.8: Rim styles (fragments)

Figures 6.2a to 6.2l: Bowl forms

Figure 6.2a: Bowl form 1

Figure 6.2b: Bowl form 1

Figure 6.2c: Bowl form 1

Figure 6.2d: Bowl form 1

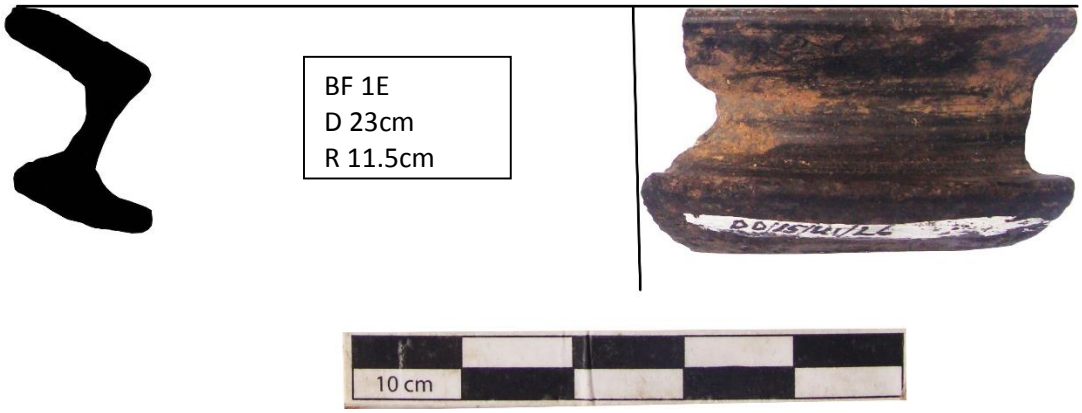

Figure 6.2e: Bowl form 1

Figure 6.2f: Bowl form 1

Figure 6.2g: Bowl form 1

Bowl form 2: The second bowl form comprised 58 sherds of open hemispherical type with slightly incurved rims. Sherds belonging to this bowl type have diameter ranging from 14cm to 28cm. The fabric of the sherds generally looks brown in colour, but they exhibit traces of smudges on the outer surface. Visual inspection of the sherds suggests that the fabric of the sherds comprises a variety of tempering agents such as crushed lateritic concretions and quartz particles due to their rough surface. There is no evidence of soot on any of the sherds, suggesting that these hemispherical bowls were not placed on the fire or used for cooking. These bowls ae believed to have originated from nearby Shai areas, and were most likely used to serve food (eating bowls).

Figure 6.2h: Bowl form 2

Figure 6.2i: Bowl form 2

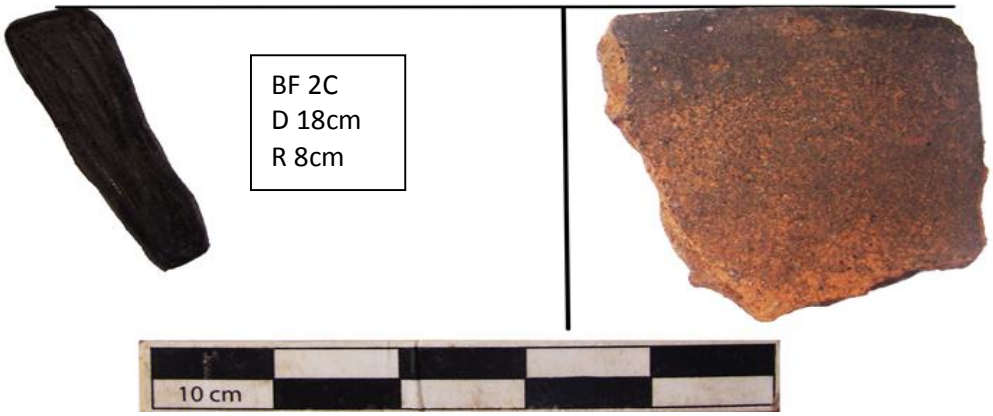

Figure 6.2j: Bowl form 2

Figure 6.2k: Bowl form 2

Figure 6.2l: Bowl form 2

Jar forms

The jars have rims and comparatively narrow necks above the shoulders and their heights are more than the maximum body or rim diameter (Crossland 1989, p. 30). Most of the jars had flaring everted rims, hemispherical in shape and gradually becoming narrower at the neck. The outward curvature of the rims makes them separate from the necks. Sherds of the jar form, found in different units of Locus 1 and Locus 2, are characteristically black in colour due to application of red slip and cooking on an open fire. They are red slipped and decorated with grooves on rim lips, necks and overhanging flanges. Though three of the sherds of the jars have eroded surfaces, traces of red-slipping could still be observed on the external surfaces. The wall immediately below the overhanging flanges gradually curves in, and then curves out to join the body of the vessels, to make the pot globular in shape. In all, 54 rims were identified as jars, and these consist of two forms of jars based on the differentiation observed in the rim types.

Jar form 1: The pots/sherds belonging to this category are 34 in number, and they have long necks (between 3 and 4cm in height) and light rims of about 5mm thickness, including the type for cooking food, medicine and storing of water. These jars are homogeneous in style and morphology. Figure *6.2m* is decorated with grooves at the neck area. The grooving consisting of broad horizontal furrows, most likely covering the entire circumference of the pot. These pots are likely to have been made by Shai people known for making pots for sale in the nearby settlements including Dodowa. There were used for storage purposes, to store both solid and liquid items.

Figures 6.2m to 6.2v: Jar Forms

Figure 6.2m: Jar form 1

Figure 6.2n: Jar form 1

Figure 6.2o: Jar form 1

Figure 6.2p: Jar form 1

Jar form 2: The second type of jars comprises 20 sherds, and the vessels are characterised by ovoid bodies, and short necks that widen outwards to form a round mouth. Their rims immediately curve out to a height about 2.5cm, and 5mm thick, and their diameter ranges between 11 and 26cm. One sherd, Figure *6.2r*, is decorated with a single perforation on overhanging flange. It is possible that there could have been more than one perforation on the pot in its whole form. The shoulder of Figure *6.2u* is also decorated with grooves in black colour. These pots were also likely to have been made by Shai people. They were used to store drinking water in most case; however, they could store solid items as well.

Figure 6.2q: Jar form 2

Figure 6.2r: Jar form 2

Figure 6.2s: Jar form 2

Figure 6.2t: Jar form 2

Figure 6.2u: Jar form 2

Figure 6.2v: Jar form 2

Rim form	Rim type				
	Bowl 1	Bowl 2	Jar 1	Jar 2	Total
Direct	7		3	1	11
Everted	78		20	30	128
Inverted		51			51
Total	85	51	23	31	190
Grand Total	190				

Table 6.9: Rim forms

6.2.1.4 The Fabric and Decoration

In general, the fabric of the sherds is coarse, and the colours observed among the sherds are black, brown, and reddish brown. Some of the sherds contain glittering flecks of mica and quartz fragments, which are natural inclusions in the clay. The most common external body treatments of the pottery from Frederikssted are burnishing, and red-slipping. The burnishing was executed by rubbing the surface of the pot with a smooth object to give the ceramic material smooth or shining and slippery surface. Slipping as a surface finish technique is generally meant to give the pot a smooth surface or as decoration on the fired or unfired pot. The red slipping is achieved by applying red ochre suspension or tree bark decoction either to certain portions or the entire surface area of the pot. The majority of the sherds from Frederikssted, however, have sandy, worn surfaces and have eroded surfaces and are also friable so identifying surface treatment has been difficult.

Surface colour: The colours of the sherds were recorded with the aid of a Munsell colour chart in order to describe the exact colours observed on the sherds. According to Orton and Hughes (2013, p. 73), the colour of pottery fabric normally depends on the firing condition, hence it is always necessary to describe pot colour by the core in relation to the firing process. The core is the part of the fabric less exposed to fire, and to some extent protected against high temperature. Pots that show black or dark-grey colour most likely

contain carbon as a result of inadequate burning of organic material contained in the fabric. In the course of firing the pot, oxygen may oxidize the core of the pot which usually results in brown and red colours (Orton & Hughes 2013, p. 73). The sherds obtained from Frederikssted excavations show different kinds of colours. Seven hundred and twenty nine (729) show black surface colour, 78 were slipped/painted red, 40 had multiple colouration of brown, red and black, 144 were brown, while 83 had their surfaces eroded with no colour.

Surface Colour	Sherd type					
	Rim	Neck	Body	Base	Total	%
Black	146	35	547	1	729	68%
Red	12	2	64		78	7%
Brown-red Black	4	2	34		40	4%
Brown	21	1	122		144	13%
Eroded	7	1	67	1	76	8%
Total	190	41	834	2	1067	100%

Table 6.10: Surface colour of sherds

Surface Treatment: Physical examination of the surface of the Frederikssted potsherds provides a way of studying and understanding surface treatments that were applied on the pot (Table 6.11). Some of such surface treatments may comprise burnishing (smoothing), slipping, and application of some mineral pigments which may act as an agent for reducing the permeability of the pottery to liquids and also serve as decorations on the pot (Orton & Hughes 2013:183).

Surface treatment	**Sherd type**					
	Rim	**Neck**	**Body**	**Base**	**Total**	**%**
None	138	23	593	1	755	71%
Eroded	10	5	22	1	38	4%
Slightly burnished	12	2	48		68	6%
Burnished	21	7	122		150	14%
Smudged	2		45		47	4%
Red slipped	5	3	2		10	1%
Micaceous	1		2		3	0%
Slipped & burnished	1	1			2	0%
Total	**190**	**41**	**834**	**2**	**1067**	**100%**

Table 6.11: Surface treatment of sherds

Smudging was also observed on some of the sherds. Smudging results from deposition of carbon on the surface of the pot during firing of the pots. The carbon deposit creates black spots on the surface and margins of the pot. This gives the pot a multi-coloured appearance. Other types of surface treatment include the application of micas on the surface of the pot. Micas are always very recognizable in the paste of a ceramic object because they tend to give shiny specks on the surface of the pot. According to Velde and Druce (1999, pp. 23-24) micas are very common and often form part of metamorphic rocks. Since micas are able to withstand the firing temperature, they could be applied to some vessels as a slip (Orton & Hughes 2013:88).

Decoration: Pottery decoration comprises two basic methods. The first decorative method involves applying material(s) to the surface of the pot. The second decorative method involves modification of the surface of the pot by using an implement or the bare hand.

Decoration	**Sherd type**					
	Rim	**Neck**	**Body**	**Base**	**Total**	**%**
Undecorated	168	34	797	2	1001	94%
Incision	2	2	19		23	2%
Applique	4	2	3		9	1%
Grooves	10	3	21		34	3%
Total	**190**	**41**	**834**	**2**	**1067**	**100%**

Table 6.12: Sherd decorations

Application of material on the surface of the pot as a decorative technique could also encompass various surface treatment procedures such as burnishing, slipping, addition of micas and smudging; however, all of these have been discussed in the previous section under *Surface Treatment*. I therefore focus on surface decorations that involve modifying the surface of the pot leaving some imprints on the surface. Various forms of modification/decoration observed on Frederikssted pottery comprise incision, applique, and grooving. However, the majority of the sherds (1001) have no decorations (Table 6.11).

Incisions: Twenty-three (23) sherds were decorated with incisions: the surfaces of the vessels were incised or cut away to create series of narrow lines on the surface.

Applique: Applique decorations are done by applying extra clay to the surface of the pot in its plastic state before firing. Nine (9) of the sherds from Frederikssted were found to have had applique decorations on their surfaces.

Grooving: Grooving decorations are generally achieved by making shallow channels on the surface of a leather hard pot through the use of a tool. The shape and the size of the tool usually will determine the appearance of the decorations. Grooves were observed on 34 of the sherds recovered from the Frederikssted excavations.

6.2.1.5 Use Wear Pattern

The general functions of vessels predispose them to different forms of wear pattern. Pots that were used as cooking vessels always show traces of wear on both inside and outside surfaces. Cooking pots placed on open fires always show traces of soot on the external surface. Sometimes fire cracks may develop as a result of contact with fire and heat (Orton & Hughes 2013:152-153).

Use Wear	Sherd type					
	Rim	Neck	Body	base	Total of Use Wear	%
None	159	4	730	1	894	84%
Charring	31	37	104	1	173	16%
Total	190	41	834	2	1067	100%

Table 6.13: Sherd used wear patterns

The burning and/or heating can also alter the colour of the vessel to indicate wear as a result of usage. Apart from cooking and heating, wear patterns can also result from various food preparation processes such as scraping, cutting, and stirring. These processes leave traces of wear especially on the inner surface of the vessel. The wear pattern identified on the Frederikssted sherds was that of *charring* where 173 (16%) sherds were observed to have been charred, while 894 (84%) sherds bear no identifiable use-wear patterns.

6.2.1.6 Minimum Number of Vessels

Minimum number of vessels is the total number of whole vessels that constitute the sherds excavated. It is achieved by examining the individual sherds after which the total number of vessels that gave rise to the sherds can be determined. We are therefore able to know the number of vessels excavated or in an assemblage. In the view of Orten and Tyers (1990, p. 83) the *minimum number of vessels*, which is analogous to the MNI statistic of animal bone studies, is done by bringing together all sherds belonging to the same vessel. As the sherds are pieced together or reconstructed, those sherds which may not fit into the reconstructions but have the same physical attributes can be assigned to the same vessel. These identical sherds, which have been described by Orton and Tyers (1990, p. 83) as a *sherd family*, are capable of giving a figure equal to or less than the actual number of vessels in the assemblage.

Similarly, the unmatched sherds are also assigned to separate vessels giving rise to an alternative approach known as *maximum number of individuals* which estimates greater than or equal to the number of vessels in the assemblage. However, Orton and Tyers (1990, p. 83) have argued that because the first method has the tendency to underestimate the exact number, and the second approach tends to overestimate the vessel count, there should therefore be an average of the two or *hybrid estimate* approach. This approach has been suggested as the appropriate way of obtaining proper estimation of numbers of vessel in a particular assemblage. This way, estimates should be based on rims or bases or other distinctive features rather than the whole vessel.

The *minimum number of vessels* of the Frederikssted sherd assemblage was achieved by *cross mending analysis*, and also grouping the 190 rim sherds according to surface finish attributes and measurement of rim diameter of the rim sherds. Rims sherds were used because it is probable that other body sherds excavated were once part of the rims. This makes rims reliable in determining MNV of fragile locally manufactured pottery. The first technique that was used is the *cross mending analysis* which involves piecing together sherds that can directly mend together. The *cross mending analysis* is capable of providing incontrovertible evidence that the sherds pieced together were once part of the same vessel, and it can provide greater precision in evaluating vessel form and vessel size (Voss & Allen 2010, p. 7). The cross mending technique identified 17 pairs (34) of rims sherds that could directly mend together to produce 17 different vessels.

Decoration	Surface treatment	Colour	Rim diameter	Number	MNV
Applique	burnished	black	20cm	1	1
Applique	burnished	brown	20cm	1	1
Undecorated	burnished	black	32cm	11	1
Undecorated	burnished	brown	32cm	5	1
Undecorated	red slipped	brown	14cm	3	1
Undecorated	red slipped	brown	36cm	2	1
Undecorated	none	black	13cm	20	1
Undecorated	none	brown	13cm	5	1
Undecorated	none	black	14cm	9	1
Undecorated	none	black	14cm	8	1
Undecorated	none	black	20cm	13	1
Undecorated	none	eroded	20cm	7	1
Undecorated	none	black	16cm	5	1
Undecorated	slightly burnished	black	16cm	5	1
Undecorated	slightly burnished	brown	16cm	5	1
Undecorated	slightly burnished	black	23cm	2	1
Undecorated	none	black	23cm	8	1
Undecorated	none	black	26cm	6	1
Undecorated	burnished	black	26cm	2	1
Undecorated	burnished	black	23cm	2	1
Undecorated	none	black	28cm	8	1
Undecorated	none	black	32cm	10	1
Incision	smudged	red	23cm	2	1
Applique	none	red	23cm	2	1
Grooves	slipped & burnished	red	23cm	1	1
Grooves	micaceous	red	23cm	1	1
Grooves	none	red	31cm	6	1
Grooves	none	black	31cm	2	1
Undecorated	none	Brown-red Black	36cm	4	1
Undecorated	none	black	36cm	4	1
Total					
Cross mending				34	17
Fabric analysis				156	30
Grand total				**190**	**47**

Table 6.14: Minimum Number of vessels based on rim count

The second technique was examining the surface finish attributes, which involves surface treatment patterns such as colour, decoration, burnishing, smudging, slipping, and application/inclusion of micas. The sherds were examined after which those with similar surface finish attributes and the same rim diameter were grouped and assigned to the same vessel while the dissimilar ones were assigned to separate vessels. Rim sherds that exhibited combination of this formula were assigned to the same vessel: *Decoration+ Surface treatment + Colour + Rim diameter*. This method also identified 30 vessels from the 156 rim sherds that were analysed. Therefore, MNV identified from the Frederikssted excavations have been estimated at 47 based on the two techniques mentioned above. The table above shows the detailed fabric analyses.

6.2.2 Local Beads

The local beads recovered from Frederikssted excavations were mainly glass beads which consisted of locally manufactured varieties. Glass beads made in Ghana are generally made from disused glass materials or older beads by crushing them into smaller chips or pounding the glass into powder. The bead makers pour the crushed or powdered glass into a mould made of fired clay with cylindrical cavities. Normally the stem of a cassava leaf is placed in the middle of the powder glass already poured into the mould; this stick will burn away leaving a vertical hole in the middle of the bead, and the hole will then facilitate stringing. The prepared moulds are placed and heated in an updraft furnace to temperature of about 900°C for the powder glass to fuse together. Sometimes straight stripes, spiral stripes, dots and other decorations are created in the mould so as to leave imprints on the bead. After the beads are formed, the glass beads are shaped, refined and polished with sand and water. During the polishing process, the beads are gently rubbed on flat stone with sand water suspension to achieve the desired smoothness. Sometimes the beads are strung on a metal wire before rubbing.

6.2.2.1 Beads in the Archaeological Record in Ghana

Archaeological evidence shows that beads were made and used in Ghana prior to the arrival of the European merchants and colonials. The earliest evidence of beads usage in Ghana comes from the Late Stone Age context of Kintampo rock shelters K6 and K8 dated to about 1450BC. This is a period that was characterised by beginning of food production and settled life. Archaeological data from Kintampo K6 and K8 rock shelters have revealed burials where the decedent adult female was buried with a string of shell disc beads around the neck, while a male adult also had strings of stone beads on the wrists of both hands (Flight 1967, p. 69; Watson 2010, p. 161). Beads have also been found at other Kintampo sites of Ntereso in northern Ghana, and Boyaase near Kumasi airport (Davies 1980, p. 219; Anquandah 1982, p. 63).

Bredwa-Mensah (1990) documents the use of bone, teeth, ivory, and stone as beads from both Iron Age and historic contexts where the former Ga capital of Ayawaso is known to have used different types of beads around the sixteenth century and late seventeenth century. The manufacture and use of stone beads in Ghana is said to be of remote antiquity. For example, archaeological and historical studies have shown that the Akyem

of south-eastern Ghana have made and used bauxite beads from the medieval times up to today (Davies 1967, pp. 285-7). The Akyem people at Abompe are known for making bauxite beads through simple but effective indigenous technology (Bredwa-Mensah 1996b, p. 14). Both bauxite and granite beads of seventeenth century origin have also been excavated from the site of Asebu in the Central Region of Ghana (Nunoo 1957, p. 12). Ozanne (1962, p. 65) suggests that European traders, mainly the Dutch, were known to have traded blue beads variously known as *Aggrey beads*, *koli*, *akori* or *coris* by buying these beads from the coast of Accra for resale in other areas on the Guinea Coast during the seventeenth century.

Archaeological evidence of the manufacture of local glass beads at the ancient trading centre of Begho of Brong Ahafo Region of Ghana has revealed glass wasters from the manufacture of drawn beads during the seventeenth and the early eighteenth centuries (Kumakpor et al 1995, p. 13). Glass beads manufactured in moulds dated to the seventeenth century were excavated at New Buipe in northern Ghana (Lamb 1978) while Bellis (1972, p. 85) reports of other forms of powder glass beads (made in moulds) at Twifo Heman about 100km northern of Elmina. Today manufacturing of glass beads is still being practiced by the Asante, Krobo (including Dodowa), and Ewe bead makers. Various non-European/local beads which occur in the nineteenth century contexts are certainly the forerunners of the fired beads still produced in Ghana today (DeCorse 1989, p.50)

6.2.2.2 Uses of Beads.

It has been argued that the use of beads in West Africa predates the arrival of the Europeans at the Gold Coast. Beads have variously been used in Ghana not only as body ornamentation but also as essential material culture in different sociocultural contexts, which express the African cultural and social identity (Kumepkor et al 1995, p. 16; Wilson 2003, p. 1; Francis 1994, p. 104; Panini 2007, p. 22; Stine et al 1996, p. 55). In Ghana beads feature prominently in everyday dressing habits. Beads are worn in people's hair, on clothing, and as necklaces, bracelets, waistbands, and anklets. Beads may convey social meaning to symbolise wealth, age grade, marital status, artistic attitudes, and political, religious, and cultural affiliation. Beads have also been associated with myths, with ceremonies such as rites of passage, and with religious cults, and made into sculptural beadwork and worn as amulets and charms (Stine et al 1996, p. 53).

6.2.2.3 Frederikssted Local Beads

A total of 192 locally manufactured beads were recovered from the Frederikssted excavations. The locally manufactured beads were only recovered from Locus 2 excavations. They were powder glass beads made by crushing and heating glass so that the glass particles fuse together in a mould. This is demonstrated by a number of bead moulds recovered from Unit 1 of Locus 2 during the excavations. The presence of the moulds suggests that the beads were manufactured at the site. Two types of local beads were identified based on the type of mould in which they were placed. The moulds have been identified as vertical and horizontal moulds.

Bead colour	Bead type		
	Vertical	Horizontal	**Total**
Blue	7		**7**
Yellow	31	23	**54**
Striped		58	**58**
Multicolour	47	26	**73**
Total	**85**	**107**	**192**

Table 6.15: Bead colour (local beads)

Beads produced in vertical moulds are vertically placed in the mould and always shorter in length, while horizontal beads are produced by placing the powder glass in horizontal mould to produce relatively longer beads. Colour is, however, applied randomly in all cases. The colours observed among the local beads are mainly yellow. All the other local beads were decorated in different shades of blue and white. While the yellow is the dominant colour, the blue colour was applied to form annular bands on the vertical beads (Figure 6.4, A, B, C). However, the horizontal beads show somewhat multi-coloured appearance with blue and white colours forming stripes in the dominant yellow background. It can be observed that beads were not painted but were decorated with other colours of glass which were added to the dominant yellow powder glass to fuse together. It must also be stated that the greater majority (190) of the local beads are either unpolished or rough outs. Two beads (Figure 6.3: *A* and *B*) are the only finished or polished local beads recovered from the excavations.

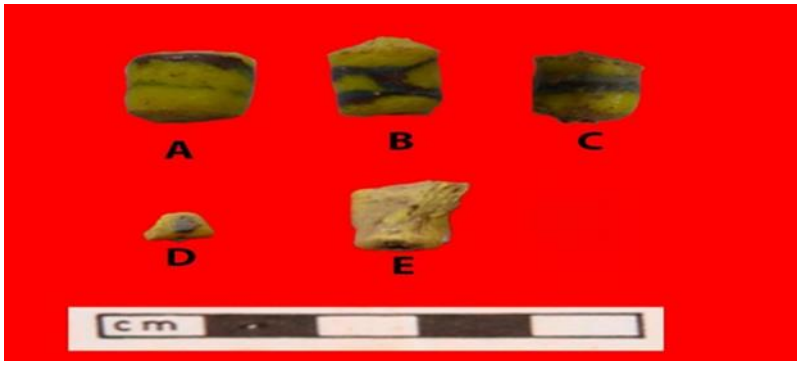

Figure 6.3: Local beads (Vertical beads)

Beads *C, D, E* of (Figure 6.3), for example, were excavated while they were still stuck in the bead moulds. This may suggest that the beads were manufactured on site and sent to markets for sale, leaving the production debris in the archaeological record.

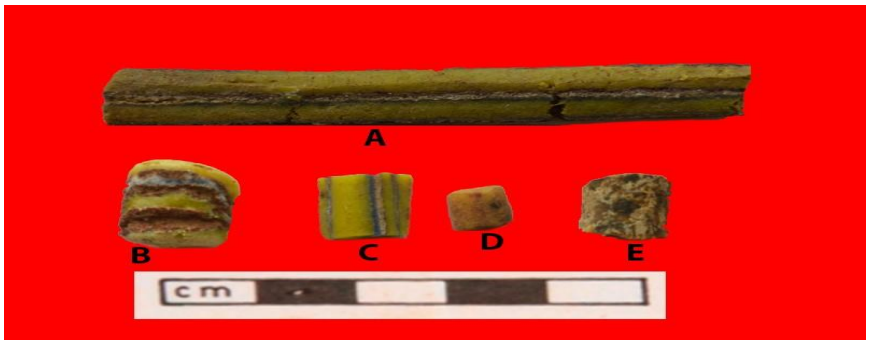

Figure 6.4: Local beads roughouts (horizontal beads)

These beads were found in Unit 1, Locus 2. They were found in association withnineteenth century European ceramics. They are therefore assigned to nineteenth century local occupants during the post-plantation phase.

Provenance			**Bead type**		
Locus	Unit	Level	Vertical	Horizontal	Total
2	1	2	6	9	15
		3	10	23	33
		4	11	15	26
		5	17	25	42
		6	15	23	38
		7	10	18	28
		8	4	6	10
Total					**192**

Table 6.16: Locally manufactured beads (types)

6.2.2.4 Bead Moulds

Bead moulds are some of the durable indicators of bead production. Bead moulds are fired clay materials that contain the pulverised glass meant for heating. Two types of bead moulds were recovered from the excavation at Frederikssted, *vertical* and *horizontal* bead moulds.

Locus	Unit	Level	Vertical	Horizontal	Total	MNI
2	1	2				
		3				
		4				
		5	14	1	15	5
		6	23	2	25	9
		7	12	1	13	4
		8	7	1	8	3
Total			**56**	**5**	**61**	**21**

Table 6.17: Bead moulds

Vertical bead moulds

In this type of bead technology, relatively short beads are produced in the mould and the holes are formed vertically. The typical characteristics of the vertical bead moulds are the multiple perforations or cavities that can be found on the flat surface of the mould. The perforations contain powder glass that forms the bead after heating in the oven. Fifty-six (56) pieces of vertical bead moulds were found in the excavations from level 5, 6, 7 and 8 of Unit 1 of Locus 2. Some of the vertical bead moulds that were recovered had some bead rough-outs still stuck in them.

Figure 6.5: Vertical bead moulds

Horizontal bead moulds

The horizontal moulds are longer moulds placed horizontally to produce long sintered glass canes which are later cut into smaller and shorter beads. In this type of moulds, the hole is in a horizontal position. The bead makers pour the pulverised glass into the long channel of the horizontal mould with a reed stalk halfway up to produce the hole in the cane.

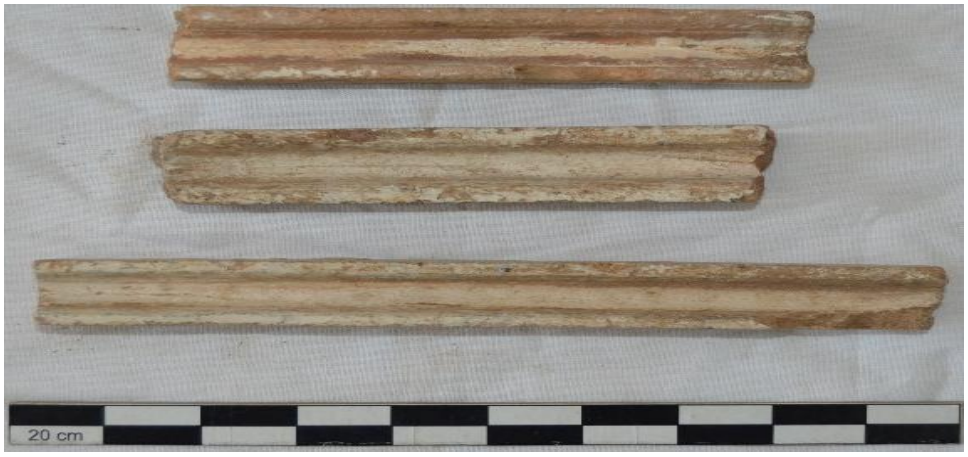

Figure 6.6: Horizontal bead moulds

The moulds are heated in an updraft oven until the powdered glass melts and produces glass canes for bead making. Five pieces of the horizontal moulds were obtained from level 5, 6, 7 and 8 of Unit 1 at Locus 2; they were about 20cm long and have about 7mm wide furrows which run to the entire length of the mould. The presence of the beads and the accompanying bead moulds suggest that the Frederikssted occupants, either the African slave workers or later occupants, produced beads on site.

6.2.3 Local Clay Smoking Pipes

Two bowl fragments of local red clay smoking pipes were found at Locus 1. One was found in *Unit Level 3 (*Figure 6.8A*).* It has a flat ring close to the mouth of the bowl with the middle hole clearly visible. The other local clay pipe (Figure 6.8B) was also retrieved from *Unit 4 Level* 2. This has oblique roulette impressions covering the entire surface of the fragment. These fragments of clay smoking pipe were likely made by the Africans in an attempt to imitate the European types.

Figure 6.7: Locally made smoking pipes

6.2.4: Faunal Remains

Our understanding of subsistence practices at the Frederikssted plantation site is derived largely from an analysis of animal bones. The excavations yielded a relatively large assemblage of faunal remains exclusively obtained from Unit 1 of Locus 2. Overall faunal remains retrieved from the excavations were 831 (Table 6.9.1). This constitutes the Number of Identified Specimens (NISP). The non-diagnostic bone fragments that were counted numbered 191. They are fragmentary and it has not been possible to tell whether they are of domesticated or wild species. Indeterminate fragmentary faunal remains are common in most archaeological excavations in Ghana, explicable by ethnographic analogy with eating habits in Ghana which involve cracking bones either to extract marrow or eat up some parts of the bone. However, the identifiable faunal assemblage was dominated by mammals, the majority of which were identified as bovid. The Frederikssted inhabitants probably used different types of traps to obtain wild animals such as rodents, birds, and other mammals. They also collected two types of giant land snails, *Achatina achatina* and *Achachatina.* These snails are still available today in the Dodowa valley, along the banks of the Dodowa River, and people of Akan descent still collect them for food.

Fish remains were also identified among the assemblage, suggesting that fish also constituted an important food resource for people who occupied Frederikssted. Even though the Dodowa River which drains the site vicinity is seasonal, the inhabitants may have obtained some of the fish from it. The mudfish, for example, is still being caught in the Dodowa River with the use of basket traps up to today. Evidence of catfish, which live in major rivers, suggests that Frederikssted inhabitants through local trade obtained

fish from the Volta River, about 30 km from Dodowa. According to oral historical accounts, the Dodowa market was the nerve enter of trading activities that attracted both Europeans and local traders in the eighteenth to the mid-twentieth century.

In addition to riverine species, other wild fauna was also recovered. Wild taxa associated with both savanna and forest ecology include wild and domesticated bovid (which has higher percentage of remains), rodentia like giant rat and grasscutter, insectivore (mole) and aves (birds). The birds may belong to domestic fowls or African francolin which was widely hunted by enslaved workers on Frederiksgave plantation (Bredwa-Mensah 2004, p. 220).

Figure 6.8: Lower jaw of a pig

Figure 6.9: Bone fragements

Species	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Total NISP	Total MNI
Insectivora (mole)	3		1		2				6	5
Bovid	3	2	28	23	183	10	10	16	275	99
Bos tarurus (cattle)			4	10	95		1	2	112	56
Pisces (fish)			4	5	0	2	6	1	18	12
Sus scrofa (dom. pig)			1	4					5	5
Aves (bird)			2	4	58	3	2		69	34
Bovid (goat)					106				106	41
Eutropus niloticus (catsish)					1				1	1
Rodentia (rat)					16		3		19	15
Rodentia (grasscutter							2		2	1
Gastropoda (land snails)								27	27	27
Non-diagnostic			9	9	164	4	3	2	191	32
Total	**6**	**2**	**49**	**55**	**625**	**19**	**27**	**48**	**831**	**312**

Table 6.18: MNI of faunal remains from Locus 2 Unit 1

The wild species may have been hunted or collected by opportunistic hunters or skilled hunters. The identifiable domesticates that were recovered were cattle, goat/sheep and domestic pig.

All the faunal materials came from Unit 1 of Locus 2. This is refuse primarily/only associated with African inhabitants of the site. The assumption therefore, is that, the faunal materials were associated with African inhabitants during the post-European/plantation occupation period in the nineteenth and the twentieth centuries.

Locus 2												
Species	**Element**	**NISP**	**MNI**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**	**Level 7**	**Level 8**	**Total (NISP**
Insectivora (mole)	Skull	1	1	1								1
	Tooth (canine)	1				1						1
	Tibia	2	2	2								2
	Lower jaw	1	1					1				1
	Femur	1	1					1				1
	Total	**6**	**5**	**3**		**1**		**2**				**6**
Bovid	Scapula	7	5	1			2	4				7
	Bone shaft	46	10	1		8	2	31	1	1	2	46
	Rib	24	11	1		2	1	17	2		1	24
	Phalenge	15	7		1	3	5	5	1			15
	Tooth (premolar)	39	9		1	7	3	21	1	1	5	39
	Lower jaw	21	13			2	1	10		2	6	21
	Tibia (proximal)	4	4			1		1	1		1	4
	Skull	89	17			1	1	78	4	5		89
	Clavicle	2	2			1		1				2
	Ischium	1	1			1						1
	Humerus (distal)	6	4			1	1	4				6
	Cuneiform	2	2			1		1				2
	Tibia Distal	2	2				1	1				2
	Metatarsal (distal)	7	4				4	2		1		7
	Lunate	1	1					1				1
	Fibula (distal)	1	1					1				1
	Femur (distal)	1	1					1				1
	Vertebra	2	1					2				2
	Metatarsal (proxima	5	4				2	2			1	5
	Total	**275**	**99**	**3**	**2**	**28**	**23**	**183**	**10**	**10**	**16**	**275**
Bos taru (cattle)	Bone shaft	20	4			4		15		1		20
	Teeth (molars)	3	2				2	1				3
	Teeth (pemolars)	11	3				4	5			2	11
	Teeth (incisor)	1	1				1					1
	Phalenge	11	6				3	8				11
	Metatarsals (distal)	3	2					3				3
	Tibia (proximal)	5	2					5				5
	Ischium	1	1					1				1
	Rib	1	1					2				2
	Skull	36	21					36				36
	Humerus (distal)	1	1					1				1
	Vertebrae	18	12					18				18
	Total	**112**	**56**			**4**	**10**	**95**		**1**	**2**	**112**
Pisces (fish)	Skull	9	3			4	4		1			9
	Vertebrae	9	9				1		1	6	1	9
	Total	**18**	**12**			**4**	**5**		**2**	**6**	**1**	**18**
Sus scrofa (dom. Pig)	Tooth (molar)	2	2			1	1					2
	Lower jaw	1	1				1					1
	Tooth (incisor)	1	1				1					1
	Tooth (premolar)	1	1				1					1
	Total	**5**	**5**			**1**	**4**					**5**
Aves (bird)	Radius	5	5			1	4					5
	Ulna		3			1		2				3
	Skull	1	1					1				1
	Bone shaft	47	25					43	2	2		47
	Femur (distal)	3	3					2	1			3
	Sternal rib	2	1					2				2
	Tarsometatarsus	2	1					2				2
	Clavicle	2	1					2				2
	Humerus	1	1					1				1
	Procoracoid	3	2					3				3
	Total	**69**	**34**			**2**	**4**	**58**	**3**	**2**		**69**
Bovid (goat)	Horn core	1	1					1				1
	Lower jaw	13	8					13				13
	Phalenge	11	3					11				11
	Metacarpals (distal)	2	2					2				2
	Metatarsal (distal)	6	2					6				6
	Metatarsal (complet	2	2					2				2
	Metatarsal (proxima	2	2					3				3
	Scapula	2	2					2				2
	Ischium	1	1					1				1
	Tibia (proximal)	5	5					5				5
	Fibula (proximal)	1	1					1				1
	Bone shaft	57	10					57				57
	Vertebral spine	1	2					2				2
	Total	**106**	**41**					**106**				**106**
Eutropu niloticus (catfish)	Fish spine	1	1					1				1
	Total	**1**	**1**					**1**				**1**
Rodentia (rat)	Skull	3	2					3				3
	Ischium	1	1					1				1
	Rib	4	3					3		1		4
	Femur	1	1					1				1
	Lower jaw	5	4					3		2		5
	Tooth (premolar)	3	2					3				3
	Scapula	2	2					2				2
	Total	**19**	**15**					**16**		**3**		**19**
Rodentia (grass cutter)	Tooth (incisor)	2	1							2		2
	Total	**2**	**1**							**2**	**0**	**2**
Gastropoda (land snails)	Shells *(Achati achatina)*	20	20								20	20
	shells (*Archachatin*	7	7								7	7
	Total	**27**	**27**								**27**	**27**
Non-diagnostic		**191**	**32**			**9**	**9**	**164**	**4**	**3**	**2**	**191**
	Grand Total	**831**	**312**	**6**	**2**	**49**	**55**	**625**	**19**	**27**	**48**	**831**

Table 6.19: Faunal remains from Unit 1, Locus 2 (NISP&MNI)

6.3 European Materials

Two groups of people have always occupied slave plantations, European planter residents and African slaves or other local residents; therefore, it was to be expected that the pattern of artefacts use would vary at Frederikssted plantation. Indeed, there is a distinction between the artefact pattern of the European planters and Africans who lived on Frederikssted plantation. This section discusses the various items of European material culture from the excavations. These foreign materials comprise materials that originated from Europe as well as material from elsewhere but brought to West Africa by European colonials and traders. It must be noted that though the term *European materials* is used in this discussion, slaves or indigenous Dodowa residents could have also procured, used and/or reused some of these European materials on the plantation landscape. The following were the materials of European origin that were recovered from Frederikssted excavations:

European ceramics
Glass materials
Metals
European imported beads
European smoking pipes
Cowrie shells
Slate fragments
Slate pencils
Buttons
Buckle
Coin
Finger ring
Gun cartridge

Locus 1						Locus 2					
Material	**Date**	**Unit**	**Level**	**Number**	**MNI/MNV**	**Material**	**Date**	**Unit**	**Level**	**Number**	**MNI/MNV**
Tuscon Rose	1814	3	4	7	2	Press moulded cer.	1891	1	6	31	7
Stoneware	1820	2	4	5	2	Tel. insulators	1885	Surface	N/A	2	2
Bouquet printed	1826	2	4	2	1	Malkin Belle	1891	1	5	2	1
Clobbering	1840s	4	3	2	2	Doll	1837	1	5	2	1
Bortanical tr.print	1810	3	3	2	1	Oriental design	1830s	1	4	2	1
Other tr. Printed	1830s	3	3	5	3	Schnapps/gin	1850	1	5	36	4
Sauce bottles/clos.	1850	2	3	31	11	Champagne/wine	1820s	1	4	55	10
Body cream	19th C	3	3	17	10	Beer bottle	20th C	1	4	7	7
Poison and medicine	1800s	2	2	5	4	Bitters	1824	1	5	2	2
Prosser beads	1830s	6	3	8	8	Mineral water	1890s	1	5	4	4
Plastic button	20th C	3	2	1	1	Syrup bottles	19th C	1	5	12	3
Nails	1804	2	1	12	12	Perfume	1820s	1	5	6	6
	"		2	22	22	Prosser beads	1860s	1	6	3	3
	"		3	24	24	Monochrome beads	Mid-19th C	1	3	3	1
	"		4	2	2		"	1	4	7	4
	"	3	1	16	16		"	1	5	4	4
	"		2	27	27		"	1	6	3	2
	"		3	31	31		"	1	7	12	5
	"		4	2	2	Blue heart bead	19th C	1	5	1	1
	"	4	1	24	24	Local beads	20th C	1	2	15	15
	"		2	30	30		"	1	3	33	33
	"		3	26	26		"	1	4	26	26
	"	5	1	3	3		"	1	5	42	42
	"		2	12	12		"	1	6	38	38
	"		3	31	31		"	1	7	28	28
	"		4	3	3		"	1	8	10	10
	"	6	1	5	5	Slates	19th C	1	4	3	1
	"		2	9	9		"	1	7	2	1
	"		3	15	15	Slate pencils		1	3	4	4
	"		4	3	3		"	1	4	4	4
	"	7	1	4	4		"	1	5	8	8
	"		2	9	9		"	1	6	2	2
	"		3	2	2		"	1	7	1	1
Padlock	19th C	3	3	1	1		"	1	8	1	1
Padlock Keys	19th C	3	3	2	2	Nails	1804	1	1	13	13
Corned beef keys	1866	2	1	3	3		"	1	3	23	23
	"		3	1	1		"	1	4	16	16
	"	3	2	4	4		:	1	5	19	19
	"	4	3	2	2		"	1	6	14	14
Sardine keys	1866	2	1	2	2		"	1	7	5	5
	"		3	8	8	Sardine keys	1866	1	3	1	1
	"	3	2	3	3		"	1	6	3	1
	"	4	2	2	2	Corned beef keys	1866	1	4	1	2
	"	5	1	3	3		"	1	5	2	2
	"	6	2	3	3	Iron stove handles	19th C	1	6	2	2
Screws	19th C	2	2	13	13	Saucepan handles	19th C	1	3	2	2
	"		4	1	1		"	1	6	1	1
	"	3	3	3	3	Fork	19th C	1	4	1	1
	"	4	1	5	5	Knives	19th C	1	4	1	1
	"		2	3	3		"		5	1	1
	"	5	2	4	4	Spoon	19th C	1	6	2	2
	"		4	2	2	Singer s. machine	1851	1	5	1	1
Washers	19th C	2	1	5	5	Screws	19th C	1	3	3	3
	"		3	2	2		"	1	4	6	6
	"	3	1	2	2		"	1	5	4	4
	"		4	3	3		"	1	6	7	7
	"	6	2	3	3		"	1	7	8	8
Machete	19th C	2	3	2	2	Washers	19th C	1	3	1	1
Hoe blade	19th C	3	3	2	2		"	1	4	4	4
Splitting maul	19th C	5	2	1	1		"	1	5	3	3
Metal balls	20th C	6	3	3	3		"	1	7	2	2
Metal hooks	19th C	2	2	1	1	Machete	19th C	1	6	1	1
	"	3	1	1	1	Scissors	19th C	1	6	1	1
Total				**487**	**447**	Metal gong	19th C	2	4	1	1
						Total				**560**	**430**

Table 6.20: European made materials

6.3.1 European Ceramics

The recovered European/ imported ceramics amounted to 372 sherds (Table 6.21). The sherds were sorted by ware type and decorative patterns. The ware typology includes Creamware, Pearlware, Semi porcelain, True porcelain, Stoneware, and Whiteware. The decorative patterns also include cut-sponge-stamp, annular bands, tortoise-shell and various transfer printing motifs (which are also discussed).

Locus 1			**Ware**	**Decoration**	**Date**	**Functional type**										
	Unit	Level	Creamware			Cup	Saucer	Plate	Bowl	Vase	Lid	Tel. mat	Doll	Bottle	Total	NMI
	Unit 2	Level 3		Greek key	1820			1							1	1
	Unit 3	Level 3		Blue-on-white	1830s			8							8	6
		Level 4		Windmill	1775-1820			3							3	2
	Unit 4	Level 3		Clobbering	1840s	1					1				2	2
	Unit 4	Level 4		Unidentified				2							2	2
	Unit 3	Level 4	True Porcelain													
	Unit 2	Level 2		Plain	1720-1900	4		6							10	4
				Botanicals	1810			2							2	1
	Unit 2	Level 4		R. Copenhegan	1770	3									3	1
	Unit 2	Level 4	Stoneware	Brown bottle	1820s									5	5	2
			Whiteware	Tuscan Rose	1814			7							7	2
				Bouquet	1826			2							2	1
			Locus 1 Total			**8**		**31**			**1**			**5**	**45**	**24**
					Locus 2											
Locus 2			Creamware	Annular banded	1780				10						10	3
	Unit 1	Level 1		Plain	1780s			10							10	7
		Level 2		Cut sponge stamp	1845				6						6	2
		Level 5		Whieldonware	1740					60					60	1
		Level 5		Floral design	1830s			2							2	2
		Level 6	Pearlware													
				Blue-on-white	1790-1840			28							28	13
		Level 4		Mocha	1790s	5									5	1
		level 5		Willow	1795			11							11	1
		Level 6		Floral pattern	1790-1840			62							62	23
		Level 6	Semi-porcelain													
				Malkin Belle	1891		2								2	1
		Level 5		Pressed moulded	1891			31							31	7
		level 6		Plain	1885							2			2	2
			True Porcelain													
				Plain	1720-1900	9		70							79	21
		Level 5		Pierced edge	Mid-19thC			15							15	1
		Level 5		Plain	1837								2		2	1
			Whiteware													
		Level 6		Oriental pattern	1830			2							2	2
			Locus 2 Total			**14**	**2**	**231**	**16**	**60**	**0**	**2**	**2**	**0**	**327**	**88**
			Sum total: Locu 1&2			**22**	**2**	**262**	**16**	**60**	**1**	**2**	**2**	**5**	**372**	**112**

Table 6.21: European ceramics forms and decrations (Fragments and MNI)

	Locus 1		Creamware/decoration											Pearlware			Semi-porcelain			True porcelain				Stoneware		Whiteware					
	Unit	Level	Greek key	Blue-on-white	Windmill	Clobbering	Annular banded	plain	Cut sponge stamp	Whieldonware	Floral decoration	Unidentified	Blue-on-white	Mocha	Willow	Floral	Malken Belle	Tel. insulators	press molded	Plain	Royal Copenhagan	Pierced edge	Botanicals	Chocolat brown	Tortilla brown	Oriental pattern	Tuscan Rose	Bouquet	Total	MNI
	Unit 2	Level 1																												
		Level 2										1								10									11	8
		Level 3	1																										1	1
		Level 4										1									3			1	4			2	11	5
	Unit 2 total		**1**									**2**								**10**	**3**			**1**	**4**			**2**	**23**	**14**
	Unit 3	Level 1																												
		Level 2																					2						2	1
		Level 3		8																									8	2
		Level 4			3																						7		10	4
	Unit 3 total			**8**	**3**																		**2**				**7**		**20**	**7**
	Unit 4	Level 1																												
		Level 2																												
		Level 3				2																							2	2
		Level 4																												1
	Unit 4 Total					**2**																							**2**	**3**
	Locus 1 total		**1**	**8**	**3**	**2**						**2**								**10**	**3**		**2**	**1**	**4**		**7**	**2**	**45**	**24**
	Locus 2																													
	Unit 1	Level 1					10																						10	3
		Level 2						10	6				28																44	22
		Level 4																								2			2	1
		Level 5								60	2			5	5		2			79		15							168	32
		Level 6													6	62			31	2									101	28
		Surface																2											2	2
	Unit 1 total						**10**	**10**	**6**	**60**	**2**		**28**	**5**	**11**	**62**	**2**	**2**	**31**	**81**		**15**				**2**			**327**	**88**
Sum Total Locus 1&2			**1**	**8**	**3**	**2**	**10**	**10**	**6**	**60**	**2**	**2**	**28**	**5**	**11**	**62**	**2**	**2**	**31**	**91**	**3**	**15**	**2**	**1**	**4**	**2**	**7**	**2**	**372**	**112**

Table 6.22: European ceramics (fragments and MNI)

6.3.1.1 Creamware

Creamware derives its name from its cream colour. It is a refined earthenware which has a lead glaze of cream colour over a pale body. It is fine light-coloured earthenware made from white-firing ball clay mixed with flint. The clay-flint mix was shaped by throwing on a potter's wheel or by the use of moulds and fired at comparatively low temperature (Halfpenny 2007, p. 28; Hume1969, p. 123). Notable English potter Josiah Wedgewood, sometimes in partnership with Thomas Whieldon, started making Creamware around 1750 in Staffordshire, England. It was an undertaking to refine the somewhat old fashioned techniques of salt glaze earthenware in order to achieve a finer, thinner, whiter body with a smooth or glassy lead-glaze. Indeed, around 1780 Creamware proved so successful and superior to salt-glaze types that it became the preferred ceramic material both in England and outside England (Draper 2001, p. 47; Hume 1969, p. 123). However, creamware was replaced by whiteware in the 1820s, and during the 1840s, its popularity had waned because a cheaper version of Creamware had been developed by another English expert potter, Thomas Whieldon, which became known as *Whieldonware* or *tortoiseshell ware or Colour-glaze ware* (Draper 2001, p. 47). Creamware is of archaeological importance because during the eighteenth and nineteenth centuries it became ubiquitous in America, Europe and Africa. It turns up in almost all archaeological excavations in coastal Ghana. Different types of Creamware were excavated at Frederikssted plantation site at Dodowa. Sub-categories of sherds that were classified as creamware include Whieldon ware/tortoise shell, sponge-stamp on annular slip, annular banded wares, clobbering decorations, windmill decorations, and Greek key pattern. Dating creamware to the period around 1780 is consistent with the period of its arrival at Frederikssted plantation, which was established fourteen years later (1794).

Whieldonware: Whieldonware (sometimes referred to as *Tortoise shell ware*) is a generic name for cream-coloured pottery that is characterised by variegated polychrome surface as a result of metal oxides that are fired under a clear lead glaze. The fusing together of the various colours (brown, green, blue, purple, and yellow) on the surface areas of Whieldonware occurs as a result of the oxides melting together during the firing processes in the kiln. This creates random clouded appearance which became known as tortoiseshell (Rickard 2006, p. 21). It is believed that Thomas Whieldon (1719-1795), of Fenton Vivian Staffordshire, originally developed Whieldonware in the mid-eighteenth century, and it

became a popular artefact in many potteries in the northern Staffordshire area (Cohen and Hess1993, pp. 31-32). Hume (1969, p. 124) puts the date range of Whieldonware as covering the period 1750-75. However, Draper (2001, p. 45) puts the date a bit earlier, in the 1740s.

In the late 1750s Josiah Wedgewood partnered with Thomas Whieldon, and together they aimed to work to improve the buff/cream coloured body and also to produce an even firing rich green glaze. According to Hume (1969, p. 124; South 1977, p. 212) the even firing of the green glaze was achieved in 1759, and the presence of green glazed cream-bodied wares on archaeological sites provides a date to around the late 1750s. Thirteen fragments of cream Whieldonware were recovered from level 4 of Unit 1 at *Locus 2*. The fragments, which are in green and brown in colour, took the shape of a fish when they were pieced together. It is a Whieldon type of vase/vessel with cream coloured body moulded in the shape of a fish (showing the mouth, one eye and scales of the fish) and decorated with clouded glazes in green and splotches of brown. The manufacture of Whieldon ware/ tortoise shell patterns in green, yellow, manganese, grey and brown around the period 1740 -1780, of which the green and brown patterns were found at Frederikssted plantation site, provides a valuable temporal validation of the occupation of the site by the European/ Danish planters who made use of these vessels around 1794 when the Frederikssted plantation was established.

Figure 6.10: Whieldon vessel (creamware) from Frederikssted excavations

Plain bodied creamware: Sixteen other fragments of creamware were recovered, but they were undecorated with no design or inscription to convey any information.

Sponge stamps/annular bands: The motifs and patterns are found on already fired and glazed creamware. Figure 6.11*A*, which has Dutch origin, is a deep bowl with cut sponge stamp decorations in annular bands in the colours of blue, green, maroon and black, used as a bowl. Number *B* also has annular bands in multiple lines of blue, maron, and black and most likely made around 1780 and may have functioned as a soup bowl.

Figure 6.11 (A): (Sponge stamps on annular bands and (B) multiple annular bands (creamware deep bowls)

Windmill decoration: The use of windmills perhaps dates to antiquity. Drachmann (1966) suggests that the wind wheels made by Heron of Alexandria in Greece during the first century AD are one of the first examples of wind powering a machine in history. Windmills have played crucial roles in the manufacture of pottery products in Europe, most especially England, Holland and France. During the eighteenth century most European pottery manufacturers either owned or shared the use of water or windmill for grinding materials. Hill (2008, p. 134) reports that a windmill with five sails was built in 1770 at Leeds in England to grind the flint to mix with clay to make pots. Ground flint was of particular importance to the manufacturers of fine ceramics as it enhanced the durability of the pottery wares, improved whiteness and helped to prevent defacing of the glazed surface. Soft and hard paste porcelain (plates) manufactured in Clignancourt (France) 1771-c.1798 first had a design of a windmill printed in blue (Cushion 1965, p. 246; Chaffers 1912, p. 482). This happens to be the early mark representing one of the primitive windmills which existed at the height of Clignancourt (Chaffers 1912, p. 482).

In Holland, windmills are said to have existed at least since the beginning of the thirteenth century, thus around 1200. They were used in flood control and grinding of grains for food. However, the major development of windmills in Holland is placed towards the end of the sixteenth century and the beginning of the seventeen century (Nienhuis 2008, pp. 86-87). Holland therefore became famous for windmills, decorating its pottery with native Dutch scenes with windmills, fishing boats or sailing ships, hunting scenes, landscapes and seascapes. Even though windmills were widespread across Europe and America, they were readily identified with the Netherlands as part of Dutch pottery decorations. However, the English adopted printed decorations featuring windmills in the twentieth century, circa the 1930s (Denker 1996, p. 66). The sherds illustrated exhibit typical native Dutch scenes of coastal windmill landscapes, comprising windmills, water body, and sailing boat, a chalet printed beneath scroll foliate cartouche printed in brown and blue. The windmill decorated pottery is likely part of the material culture brought and used by the Danish planters during the later part of the eighteenth century plantation era.

Figure 6.12: Windmill printed pattern on creamware

Clobbering: The clobbering technique is the practice where patterns are finished off with enamels applied to the glaze. Due to the clobbering, these printed wares display polychrome decoration, comprising coloured enamels, pinks, greens, yellows, reds, and reddish brown which were hand-applied as highlights over the final lead glazing (Coysh & Henrywood 1982, p. 87; Samford 1997, p. 22). Clobbering is normally not executed with maximum precision and most instances are limited to small areas along the rim or marley and the body of the vessel and it is also different from similar practice where larger areas were left out with the intention to fill with enamels. The clobbering was a decorative technique used to decorate vessels which were manufactured after 1840 (Samford 1997, p. 22).

The decorations on sherds illustrated seem to have been executed through clobbering. Figure 6.13 number *A* is a lid of a pot (probably teapot) with three-branched foliage with red flowers set between two scrolls. The top of the lid, close to the handling knob area is characterised by a constellation of sacred geometric pattern which goes round the entire vessel. The red flowers seem to have been clobbered on as a final touch. Figure 6.13 number B, which is a fragment of a teacup, has a human figure in between transfer printed and clobbered decorations. Clobbering has commonly been found with pottery designs such as Mason's Blue Pheasant and Rose patterns with Swansea and Herculaneum in England as the areas known to have produced wares by using the clobbering decorative technique. These areas produced wares with ochre rim while orange colour was used to clobber Shorthose teawares (Coysh & Henrywood 1982:87).

Figure 6.13: Clobbering decoration on creamware

The Greek Key pattern: The Greek key pattern is a transfer printed decorative pattern comprising lines turning at right angles to one another to form a continuous meander (Clark 2010, p. 116).

Figure 6.14: Greek key pattern on creamware

The Greek pattern including Greek key border pattern was developed during the early Iron Age or the Geometric period in Greece around 900 BC – 700 BC (Vickers 1999, p. 12). At the beginning of the nineteenth century, between 1810 and 1825, interest in Greek culture in England surged substantially, and this led to the use of classical Greek figures and designs including the Greek key pattern at the outset of the nineteenth century (Coysh & Henrywood 1982, p. 162).

Different English potters and potting centres such as Herculaneum, Spode, and Wedgewood were interested in manufacturing of different Greek patterns; however, the origin of the Greek key pattern has been attributed to Liverpool Herculaneum pottery around 1810 to 1820 (Hyland 2005, p. 234; Coysh & Henrywood 1982:162). The sherd illustrated is a blue transfer printed Greek key pattern on creamware pottery. The plate fragment was retrieved from Unit 2, level 3 of Locus 1. The meandering Greek key pattern is found on the border of the plate wares which, according to Coysh and Henrywood (1982, p. 162), is typical of Herculaneum pottery in the early nineteenth century.

6.3.1.2 Pearlware

Pearlware was developed and produced by English potter Josiah Wedgwood in1779 and became a leading ceramic material from 1810 until 1820. It is refined earthenware with kaolin clay body and has blotches of blue colour through the addition of cobalt blue, making it a slightly blue glazed variant of cream ware (Draper 1969, p. 51). The blue colour is achieved by applying cobalt oxide under the glaze on the fired clay ware, before the object is then glazed. The final product then comes as underglaze blue painted pearlware. This seals the designs permanently under the glaze and thus protects the clay object from scratches, flaking and the general wear and tear associated with on-glaze enamel decoration (http://www.thepotteries.org; 19/08/15). It must be noted that the most important single diagnostic feature in identifying pearlware is the cobalt blue glaze over a whitish body. Pearlware is easily distinguishable from creamware by the way in which the tint of blue appears in gaps of foot rings and around handles of the ceramic object.

Pearlware has also been found on most early nineteenth century sites taking different ceramic shapes such as mugs, jars, and bowls decorated in horizontal bands of black, green, light brown or pale blue, which are collectively referred to as “annular wares” which were common in 1795 to 1815. It is worthy of note that “Mocha” appeared together

with the annular wares around the 18th century and continued into the 19thcentury. "Mocha" is characterised by fern-like ornament on annular wares, some of which were found in Frederikssted excavations. By 1820 various forms of hard white wares and semi-porcelain were being made in England which led the popularity of pearlware to wane, making creamware and pearlware the direct ancestors of modern white earthenwares (Draper1969, p. 51; Hume 1969, p. 130). The pearlware ceramic fragments recovered from Frederikssted excavations comprise Mocha design and Willow transfer print.

Mocha

Named after the mocho stone, an agate stone with delicate tree-like markings, mocha is believed to be most renowned of all the factory-made slip decorations (Sussman 1997, p. 26). Rickard (2006, p. 12) states that mocha was a dendritically decorated ware that belonged to a category of British pottery produced generically by other potters during the 1790s.

Figure 6.15: Mocha with annular bands on pearlware

The mocha pottery recovered from Frederikssted (Figure 6.15) is a pearlware mug/tankard with white, blue and black bands at the rim area. The greater part of the body has greenish-blue slip colour laid as background with mocha decoration applied in the greenish-blue background. Additional black band(s) can also be observed at the base area. No manufacturer mark could be identified, while the probable handles are undecorated.

Willow pattern

According to Noel Hume (1969, p. 130) the earliest transfer printed Willow pattern and associated chinoiseries are all found on pearl ware. The willow design is believed to have been initiated by Thomas Milton at Caughley; it was then shipped to China for use on export ceramics. The first products arrived back in England in 1792 (Coysh & Henrywood 1982, p. 402; Noel Hume 1969, p. 130).Willow is one of the several types of blue-on-white ceramic materials with depictions of landscapes that were imported into England from China in the eighteenth century. The Oriental pattern "Willow" first appeared hand painted on eighteenth century Chinese porcelain, then on English porcelain and earthenware after 1813. Quite a number of potteries in the United Kingdom still produce the "Willow" pattern, a good case in point being Churchhill (Snodin 2006, p. 84; Snodin & Haward 1996, p. 203). The Willow pattern is usually printed on circular or ovate pearlware ceramic materials, with the entire pattern found in a waterside background/landscape in a garden scene. Generally the main features of a standard willow pattern are a teahouse or pagoda, willow tree, a bridge with people crossing it, a boat, two birds, and a fence (set in set zig-zag manner) located at the frontage of the garden.

The fragment (half) of pearlware soup plate recovered from Frederikssted has a decoration of a typical "Willow pattern" printed in underglaze blue. Even though the maker's mark was missing, it can conveniently be assigned to the earlier type that was made in the eighteenth century because of its appearance on pearlware, which initially carried the "Willow pattern" (Noel Hume 1969, p. 130).

Figure 6.16: Willow pattern on pearlware

6.3.1.3 Semi-porcelain

Semi-porcelain is refined earthenware usually fired at around 1,200 degrees Celsius. This makes semi-porcelain products appear heavier and thicker than their porcelain counterpart. Although the fired clay bodies of semi-porcelain products look as much vitreous (glass-like) as true porcelain, the two are different. True porcelain clay is fired at temperatures above 1,300 degrees Celsius and its dishes appear thinner in comparative terms. According to Lenville (2001), Semi-porcelain also goes by other labels such as "Ironstone", "Ironstone China", "Royal Stone China" and "Porcelain Opaque". The origins of semi-porcelain date to the early 19th century when English potters at Staffordshire initiated the production of ware that had the semblance of true porcelain. Charles Mason is known to have patented this new ware in 1813, which he called "Ironstone China" (Noel Hume 1969, p. 131). The production of semi-porcelain gained momentum by the mid-1800s, leading to mass production and subsequent export to America, after which areas such as Ohio and New Jersey became the centres of production of semi-porcelain in the U.S.A (Lenville 2001).

The trans-Atlantic trade led to the introduction of variants of porcelain materials to West Africa. Semi-porcelain materials were part of the archaeological inventory recovered from the Frederikssted excavations at Dodowa. One of the semi-porcelain fragments, which is the base of a plain saucer, has a scallop rim and floral scroll at the border area with single black circular line below the border. It has a design on circular panel, a crown above circle containing in the centre an eight-pointed star surrounded by writing: *Royal Semi Porcelain. Fred Malkin Belle Works Burslem* written on the border. *England* and inscription *3375DS* are also written outside the circle.

Figure 6.17: Malkin Bell semi-porcelain

This information denotes the origin (Burslem in England) and the manufacturer mark of *Fred Malkin Belle* as the maker. 'Fred Malkin Belle Works Burslem' was a family business establishment that specialised in making pottery in England. The Malkins were from the pottery town of Burslem in Staffordshire and had been making pottery in the town since at least 1891 (Godden (1991, p. 410). However, in the 1960s the company merged into a contemporary porcelain tile conglomerate (buildingvancouver.wordpress.com/2011/10/10/the-malkin-brothers; 20/08/15).

Telegraph wire insulators

The two pieces of telegraph wire insulators that were found on the surface of *Locus 2* appear heavier and thicker with appearance of semi-porcelain. They are believed to be part of the telegraph infrastructure constructed by the African Direct Telegraph Company established in 1885 by John Pender of British origin. The company was one of the several cable companies John Pender established in different parts of the world. The company is known to have provided cable and wireless services in the west coast of Africa (Headrick 1991; Huurdeman 2003, p. 137). In the Gold Coast, the African Direct Telegraph Company provided cable and wireless services to a number of coastal and immediate hinterlands during the beginnings of the twentieth century. Some of the telegraph poles can still be seen standing in the Dodowa valley along the historic path to the Akuapem Mountains.

Figure 6.18: Telegraph wire insulators (semi porcelain)

6.3.1.4 True Porcelain

Porcelain is hard paste ceramic material made from kaolin (china clay) and feldspar. It is fired to a very high temperature between 1,200 and 1,400 degrees Celsius, and is white, very hard, with comparatively thinner sherds, and usually translucent when held up to a light (Draper 2001, p. 53; Stein 2008, p. 402). Draper (2001, p. 53) has further suggested that the production of other white earthenwares like creamware and delftware were attempts to imitate the exact quality of porcelain but eventually the potters unwittingly ended up producing lesser quality ware reminiscent of porcelain. The production of white hard paste true porcelain is said to have begun in China during the seventh and the ninth century AD, and it was only in the later part of the sixteenth century that trading with the West began, especially with the Dutch, Germans, and the English (Finlay 2010, p. 6; Draper 2001, p. 53). The trade contacts between the Orient and the West had a great influence on the development of pottery in their respective countries. The Germans took the lead with the first successful large scale production starting at Meissen in 1710.

The British also followed up and successfully commenced production of porcelain around 1745 at Chelsea. Within a couple of years quite a number of small potteries around the country (England) followed up including Derby, Worcester, Lowestoft, Liverpool, Plymouth, and Caughley. Most of the British potteries made soft paste porcelain. True porcelain comparable to the Meissen type in Germany was known to have been produced at Plymouth and later Bristol (Draper 2001, p. 53). The main purpose of these productions was trade. Large quantities of porcelain were produced in Europe and sold in Africa, and the Gold Coast/Ghana received generous quantities of these porcelains as trade items, which today can be found in the archaeological record throughout coastal Ghana.

For over a millennium, porcelain has been the most widely imitated pottery product in the world. Since the time of its first production around the seventh century, porcelain has played a central role in cultural exchange in Eurasia. Porcelain has also been a prime material vehicle for the transmission and assimilation of artistic symbols, themes, and designs across vast distances in different parts of the world and had a strong impact by influencing all the earlier ceramic traditions (Finlay 2010, p. 6). In some regions of the world porcelain even displaced local potting traditions altogether, thereby becoming incorporated into some indigenous cultural life. It can be observed that from the sixteenth century porcelain provides evidence for artistic, commercial, and technological

interaction between China, which originated it and Europe, which imitated it. Types of porcelain materials excavated from Frederikssted include plain porcelain, pierced-edged, ceramic/porcelain dolls, Royal Copenhagen porcelain, and botanical/floral decorated porcelain.

Plain porcelain

Plain porcelain is believed to be part porcelain types that were made at the onset of porcelain production in China between the seventh and the ninth century AD, and later in Europe (Germany and England) around 1710 (Draper 2001, p. 53; Finlay 2010, p. 6). During the excavations at Frederikssted, 81 fragments of plain white porcelain were recovered.

Figure 6.19: Plain porcelain

Absence of attributive designs, embossments and inscriptions makes it difficult to determine origins and date of manufacture. They are, however, believed to be part of the food utensils imported from Europe by the occupants of the plantation, especially the Danish planters during the late eighteenth century initial occupation.

Pierced edge porcelain

Pierced pottery decoration is believed to have been made in China around the 10th century AD, and throughout the 18th century Pierced wares were made by the Chinese and exported to Europe (Halfpenny 2007, pp. 28-29) which likely enthused porcelain manufacturers at Meissen (Germany) where some pottery was made with pierced designs during the 1730s and the 1740s (Gardner and Pell 1956, p. 23). The Frederikssted excavations yielded 15 fragments of a pierced whited porcelain plate. It has a fluted rim and the border is repeatedly pierced in such a way that the holes formed a pattern indicative of the shape of the fern plant. In a personal communication with LB Crossland

(retired professor of Archaeology) on 10th April 2015, he asserted that pierced wares were in most cases not utilitarian vessels; they were rather, symbolic (commemorative) objects. Their inner surfaces were flat and unperforated and usually bore motifs in floral, avian and human designs. In most colonial sites, the human motif could be that of a reigning monarch, which in the case of Frederikssted could be the Danish monarch but could as well be the British monarch. As the inner surface and other maker's marks were not found it is difficult to trace in which part of Europe the pierced porcelain originated.

Figure 6.20: Pierced edge porcelain from Frederikssted

Figure 6.21: A complete pierced commemorative plate for coronation of Queen Mary & King George VSource: *http://www.vanishederas.com/coronation-of-king-george-v-and-queen-mary-1911---antique-commemorative-ceramic-ribbon-plate-8934-p.asp 30-06-17*

Ceramic dolls

Two parts of ceramic dolls identified as China dolls were recovered from Fredeikssted excavations at Dodowa. The doll parts (which could be from the same doll) comprise shoulder-head and one leg believed to have been made during the mid-nineteenth century (Pearson 1992, pp. 11, 41, 179). The shoulder-head is charaterised by plain white colour, black hair, pinkish cheeks, and sloping shoulders. This shows evidence of attachment (glued) to cloth or leather torso. The leg shows a single circular groove above the calf with the foot/boot painted in brown colour.

Ceramic dolls are of two forms: figurines and jointed dolls. As Prichett and Pastron (1983, p. 326) descibe, the figurines are single piece figures often impressed in a mould with inflexible limbs and features. The jointed dolls have composite parts, such as head, legs and arms which are made of ceramic material while the body may be a cloth, leather, or ceramic material. Jointed dolls usually have their clothing made of cloth and clothes may be changed from time to time. On the other hand, the clothing on figurines may be represented ceramically as part of the figure, or clothing may be absent altogether. Some dolls exhibit a peforation in the chest plate (area below the neck) or the shoulders where it was stiched to the doll body/torso made of cloth.

Porcelian dolls made in Europe, particularly in Germany, were known as *China dolls*, (since porcelain itself was known as *China* because of its origin in China). These China dolls became desirable from the 1840s to the early 1900s (Scott 2010, p. 87) making their usage widespread in different parts of the world. Pearson (1992, pp. 11, 41, 179) notes that many of the dolls made in the earlier times (mid-nineteenth century) were characterised by this type of head which was usually glued, nailed,or sewn onto a cloth or leather body or torso.

In the case of the shoulder-head doll from Frederikssted, it has no peforation which suggests that it was glued to the body. The hair is made of the same ceramic material with splotches of black colour which may indicate that the hair was black but the black spots have been created as a result of erasure of the major part of the black colour. The cheeks and the lips are characterised by spots of pinkish colour while the shoulders are plain white, sloping and undecorated. These are features of the earlier models possibly from Germany between 1800 and 1910 (Blakeman & Smith 1983). The leg, which is believed

to be part of the shoulder-head doll, exhibits a brown painted foot/boot; this, in the view of Prichett and Pastron (1983, p. 331) was typical of heightened attention to fashion in shoes which originated in the 1860s. The leg further shows a single groove encircling the top of the calf which facilitated fastening to the stuffed body with wire or string. The China doll leg was also primarily made in Germany around 1860 to 1900 (Prichett and Pastron 1983, p. 328). The popularity of China dolls, however, began to wane in the years after the 1880s (Pearson 1992, p. 41).

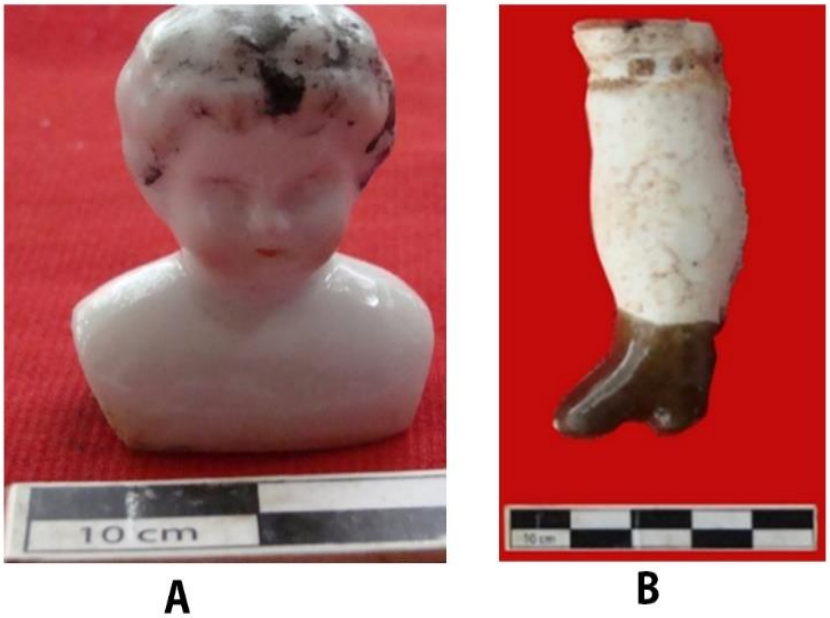

Figure 6.22: Ceramic dolls. Shoulder-head (A) and leg (B)

Royal Copenhagen porcelain

Royal Copenhagen is a pottery company founded in Denmark in 1772 and still in operation today. The company's trade mark comprises three blue wavy lines laid below a crown. The three wavy lines represent the three Danish straits, the *Great Belt*, *Little Belt and Øresund*. Royal Copenhagen produced relatively expensive Royal Copenhagen porcelain materials comprising smooth bodied ceramics as well as the popular "fluted lace" patterns in Denmark from ca. 1770 (Armstrong et al 2013, pp. 282-283; Eschen 2003, p. 158). The sherd illustrated is a smooth bodied Royal Copenhagen porcelain teacup exhibiting blue hand-decorated floral pattern on the entire body, and a single circular blue line at both the inner and the outer surface of the rim.

Figure 6.23: Royal Copenhagen porcelain

The Royal Copenhagen porcelain found at Frederikssted represents a cultural and material link between Denmark and Dodowa and is the only Danish material culture on the plantation. This ware is rarely found elsewhere on other Danish plantations in Ghana but quantities have been found in the Danish colonial port town of Charlotte Amalie, St. Thomas in the Danish Caribbean Virgin Islands (Armstrong et al 2013, pp. 282-283). Perhaps at the early stages of the Danish plantations system in Ghana, the Gold Coast possessions were well connected to the Danish Caribbean. The famous Isert's journey from Gold Coast to St. Croix in 1787, as well as the discovery of Royal Copenhagen porcelains at Frederikssted (Dodowa) and St. Thomas symbolise, the direct connection between the two Atlantic areas. The Danish occupation of St. Thomas in 1672 and that of Frederikssted in 1794 may indicate that the Royal Copenhagen porcelain recovered in Dodowa represents the early days of the Frederikssted plantation at least between 1794 and 1802.

Botanical/ floral pattern

The botanical pattern was made by Wedgewood, beginning from 1810. The patterns reflected the personal horticultural interest of John Wedgewood. The prints bear the stems of flowers, which were probably used as identification markers. Later flowers like the convolvulus were printed to reach the border (Coysh & Henrywood 1982, p. 51).

Figure 6.24: Botanical pattern

6.3.1.5 Stoneware

Stoneware is a type of clay body pottery material that is often fired to a temperature at which it becomes vitrified (glassy). The name *stoneware* is derived from its dense, stone-like character after it has been fired; it is impervious (waterproof) and typically opaque. Stonewares are typically fired between 1200 and 1300 degrees Celsius and are usually brown but can also assume other colours (Krill 2010, p. 127; Stein 2008, p. 402). The natural colour of stoneware clay is normally grey but the firing process changes it into light-brown or buff coloured, and different glazes may then be applied. Stoneware clays have been used in the manufacture of wares for commercial purposes, as well as creating fine art pottery by artists, and the earliest stoneware was produced during the era of Shang Dynasty in China around c.1400 BCE (Leach 1976).

Stoneware was first perfected in Europe by the German potters (in the Rhineland) during the fifteenth century. It was later in the seventeenth century, that the English also started producing a salt-glazed type of stoneware, which was traded in Europe and other British colonies including Gold Coast/Ghana. Stoneware bottles had been important utilitarian vessels from the beginning of the fifteenth century even up to the twentieth century. In Germany, for example, stoneware was initially used for shipping water and other liquids because only stoneware was said to be a suitable vessel that could retain carbonation when sealed properly (Adler 2005, p. 399). Between the eighteenth and the twentieth centuries stoneware vessels were used to bottle beer, spirits/liquor, non-alcoholic beverages as well as a host of liquid based products (https://sha.org/bottle/index.htm, 28/11/16). Stoneware bottles provided protection to the contents from the harmful effects of light. Even though stoneware bottles had problems of weight and closure limitations they were preferred

storage vessels, but they eventually became less popular around the early 1870s, when the process of pasteurization was applied to beer bottling which allowed lighter and large numbers of beer bottles to be bottled and transported to longer distances.

Figure 6.25: Stoneware: Fragment of Stone ware (A) and base of stoneware bottle (B)

The stoneware fragments recovered from Frederikssted excavations were part of a stoneware bottle for liquid products. Cross mending and surface features analyses were used to determine the MNI of the stoneware fragments. It was revealed that four fragments, which have the same surface colour of tortilla brown, were able to mend together. The other fragment has chocolate brown colour with a single grooving at one end. Based on the different features of the single fragment and the similarities of the other four fragments, it has been possible to estimate the MNI of the stoneware bottle fragment to be two.

6.3.1.6: Whiteware

Whiteware belongs to the fine earthenware group, which also includes creamware and pearlware. Whiteware is usually the whitest of all the three. However, whiteware was produced later to replace pearlware. Whiteware was first produced by Wedgewood in Britain in 1820, making creamware and pearlware direct ancestors of modern white earthenwares (Draper 2001, p. 51; Orser 2017, p. 91). Whiteware ceramics excavated from Frederikssted were decorated with various transfer printed decorations such as oriental designs, Tuscan Rose decorations, and bouquet transfer printed porcelain.

Oriental pattern

The border of Oriental pattern is characterised by fine stippling and small flowers. It has varying appearance but usually it contains prominent Eastern buildings, palm trees, and several figures, and sometimes with a camel in the background. The reserves portray flowers and scrolls. In some situations, large reserves show pictorial vignettes while smaller reserves show clusters of flowers. The sherd illustrates a 10cm deep plate printed in blue with the Oriental pattern. The Oriental pattern was possibly made by William Ridgway between 1830 and 1834 (Coysh & Henrywood 1982, p. 266; Blake & Freeman 1998:88)

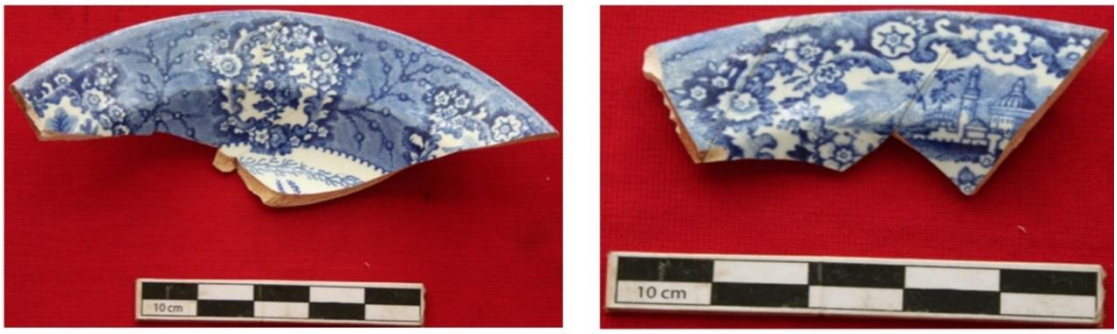

Figure 6.26: Fragments of Oriental pattern on pearlware

Bouquet

The border of the Bouquet has intertwining floral motif. The pattern has a view that consists of a vase of flowers. No marks were observed. The sherd illustrated is from a deep plate. The pattern was made by Knight Elkin & Co from 1826 to1846 (Coysh & Henrywood 1989, p. 32; Blake & Freeman 1998, p. 107).

Figure 6.27: Bouquet printed pattern on whiteware

Tuscan Rose decoration

The Tuscan Rose is believed to have been made by John and William Ridgwood between 1814 and 1830 (Coysh & Henrywood 1982, p. 372; Blake & Freeman 1998, p. 107). The Tuscan Rose retrieved from Frederikssted exhibits a floral pattern with profusion of rose flowers set within a larger part of the border. It has a view featuring blue colour serving as a background for the continuous or repeating Tuscan Rose. The edge of the rim is characterised by circles that are connected by a single blue line.

A B

Figure 6.28: Fragments of Tuscan Rose pattern on pearlware

On top of the beaded pattern is a triangular pattern with a silhouette behind, which forms a mountanoues landscape. The sherds, which bear no manufacture's mark, portray typical border motifs; designs that serve as a frame around the central decorative element on many vessel forms, and sometimes can be used as a crucial tool to dating printed wares. Samford (1997, pp. 19-20) demonstrates that border or marley designs fall into certain categories that have distinctive production periods, and that the continuous or repeating floral border designs on the sherds from Frederikssted can be dated from 1820 to 1836.

6.3.2 Glass Materials

Based on capacity, body height, and dates of manufacture and body styles, different subcategories of glass materials have been identified. The glass materials recovered from the excavations were made up of bottles for different kinds of liquids, illuminating materials and mirrors for dressing as well as drinking glasses. Some of the bottles contained alcoholic beverages such as beer, wine/champagne, spirits and bitters. Other subcategories of the bottles identified were mineral water bottles, sauce bottles, perfumery bottles, decanters and medicinal /poison bottles.

It must be said that most of the bottles examined most probably originally had paper labels, which unfortunately had not been preserved in the tropical environment of Dodowa valley. This makes it difficult to identify their erstwhile content. However, the embossed product marks on some of fragments were of great help. All the bottle fragments obtained from Frederikssted excavations amounted to 233 in number and it is observable that alcohol related glass materials form the majority (Table 6.23).

Locus 1		**Containers**										**Tableware**			**Domestic utilitarian**		
Unit	Level	Sauce bottles/closures	Medicine/poisons	Perfume bottles/closures	Body cream/pomade	Schnapps/Gin	Champagne/wine	Beer	Bitters	Mineral water	Syrup	Tumblers	Wine glass	Decanters	Mirror	Lantern shades	Total
Unit 2	Level 1																
	Level 2		5														5
	Level 3	31												7			38
	Level 4												8			4	12
Total for Unit 2		**31**	**5**										**8**	**7**		**4**	**55**
Unit 3	Level 1																
	Level 2																
	Level 3				17												
	Level 4																
Total for Unit 3					**17**												**17**
Unit 4	Level 1																
	Level 2																
	Level 3																
	Level 4											7					7
Total for Unit 4												**7**					**7**
Locus 1 total		**31**	**5**		**17**							**7**	**8**	**7**		**4**	**79**
Locus 2																	
Unit 1	Level 1																
	Level 2																
	Level 3																
	Level 4						55	7									62
	Level 5			6		36			2	4	12				34		94
	Level 6																
	Level 7																
	Level 8																
Total for Unit 1				**6**		**36**	**55**	**7**	**2**	**4**	**12**			**7**	**34**		**156**
Sum Total:		**31**	**5**	**6**	**17**	**36**	**55**	**7**	**2**	**4**	**12**	**7**	**8**	**7**	**34**	**4**	**235**

Table 6.23: Glass materials/ fragments

Glass type	Quantity	MNI	Origin	Date& ref.
Alcoholic Beverages				
a. Schnapps /Gin	36	4	Holland	1850 (Van der Sloot 1975)
b. Champagne/Wine	55	10	England	1860s (Switzer 1974:24) After1820 (Doreen 1977:38)
c. Beer	7	7	England	20th c. After 1910 (Hedges 1989:13) 1914-1918 (Roger 1978:41)
d. Bitters	2	2	Venezuela or Trinidad and Tobago	1824 (Bitterman 2015:4; Parsons 2011:10-11). Also observed from the labels of current ones still being sold
Decanters	7	1	England	Mid 18thc. (Davis 1972:14; Leigh 2002:5) 1780-1840 (Jones & Sullivan 1989:134)
Mineral water				
a. Mineral water (flip top mineral water)	4	4	Germany	1890s or early 1900s (Bredwa-Mensah & Crossland 1997:65)
General Households				
a. Sauce bottles and closures	31	11	England	1880-1900 (Musey 1970:152)
b. Syrup bottles	12	3	England	19thc. Cobalt blue 19thc–early 20th c. clear glass (Fletcher 1975:44)
Toiletries				
a. Body creams/ pomades	17	10	England, France or Denmark	Late 19th c. to early 20th c. Crossland (pers. Comm. 20th April 2015)
b. Perfumes bottles and closures	6	6	Probably France (French word *Parfumerie* written on one)	1820-1930 (Decorse 1998:34)
Drinking glasses				
a. Tumbler I (vertical ribs)	2	1	England	17thc (Decorse 2001:162) Late 19th c and early-20th c (Jones & Sullivan 1989:143)
b. Tumbler II (smooth body)	5	2	England	17thc (Decorse 2001:162) Late 19th c and early-20th c (Jones & Sullivan 1989:143)
c. Wine glasses	8	3	England	18th and 19th c (Jones & Sullivan 1989:141) 17th and 18thc (Decorse 2001:162)
Mirrors	34	1	England and France	18th C (Jones & Sullivan 1989:171)
Illumination				
Lantern shades	4	2	England	1870s to the 1920s (Jones & Sullivan 1989:31)
Chemicals/Medicines				
1 Poisons	2	1	England	Mid 1800's (Hedges 2002:15)
2 Medicinal bottles	3	3	England	Mid 1800's (Hedges 2002:15)
Total	**235**	**71**		

Table 6.24: Glass artefacts showing origins and dates

6.3.2.1 Drinks/ Alcohol Bottles

Square bottles (Gin/Schnapps bottles)

Square bottles containing gin or schnapps are generally known as case bottles. The body is normally square in cross section that tapers from a wide shoulder to a narrow cross section at the base area. The base is further characterised by a slight arch to enable the bottle to stand on four corners. Most of these bottles are translucent and opaque in olive green colour. However, examples of clear/white colour have been found containing either gin or schnapps. Bottles of this nature are known to have been produced in Europe at least as early as the mid-seventeenth century and appeared in the New World around the 1750s and 1770s (Jones & Smith 1985, p. 15). The method of producing case bottles was through the use of dip moulds, and according to Jones (1986, p. 84) "a dip mould is one in which the object being formed is inserted and extracted through the top of the mould". Therefore, the bodies of case bottles were dip moulded in square moulds. Figure 6.16 consists of square bottles: fragments of case bottles or square faced bottles with slanted applied collar and flat lip capped with a cork.

Figure 6.29: Square bottles: gin/schnapps

Seam lines could be observed running through the body and ending at the collar region. This may imply that the neck together with the lip was applied as a finish. This would suggest that the bottle was made in a mold with two separate parts, which was common practice in the nineteenth century. Dutch gin and schnapps were imported into West Africa by a variety of makers (with a variety of marks) throughout the 19th century. It is known that Dutch spirit breweries J. J MELCHERS and J.H HENKES exported gin (Genever) and schnapps to West Africa beginning circa 1850, and some of the popular brands at the time were the Stork brand of gin (Genever) and Star brand which represented Aromatic Schnapps produced by J.H HENKES while J. J MELCHERS exported its popular Elephant brand of gin (Vander-Sloot 1975; Bersselaar 2007, p. 112). In West Africa, these were respectively referred to as Elephant Gin and Bird Gin (Bersselaar 2007, p. 112).

Cylindrical bottles (wine/champagne)

Figure 6.30 illustrates cylindrical bottles with flattened string collar below the lip. They are wine or champagne bottle neck fragments; their flattened string collar below the lip is a characteristic feature of both wine and champagne bottles. However, champagne bottles have exaggerated varieties. These have an applied square ring lip, which were capped with corks. They are believed to have originated from England and are still in production today. Champagne shaped bottles were produced circa 1810 and used to bottle cider, champagne or beer.

Figure 6.30: Wine/champagne bottles

Wire cages

There is evidence of wire cages, which were woven around the top of the bottle to keep the cork firmly in place. While some of the wine/champagne bottles were excavated with the wire cages still attached, some of the wire cages were excavated separately from the bottles. This may suggest that the wire cages were completely removed from the tops of the bottles and discarded.

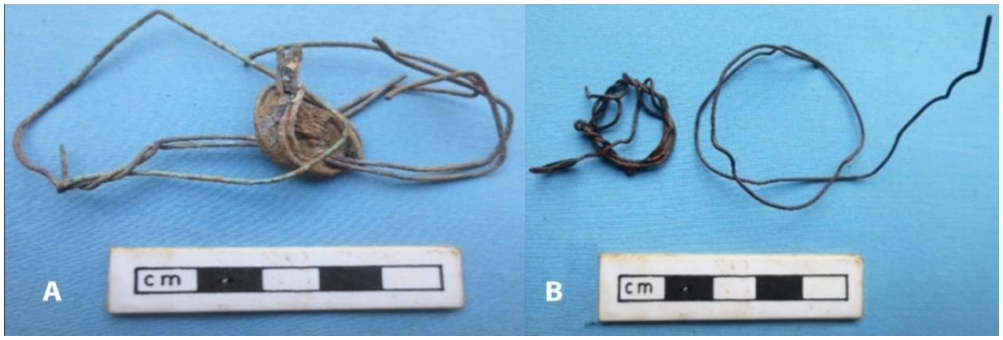

Figure 6.31: Wire cages for wine/champagne bottle tops

Beer bottles

Fragments of necks of bottles were found in green colour of Figure *6.32* (A) and whole bottles in deep amber colour (B), all with seam lines running through the body to the lip and machine made crown seals; these contained beer, and originated from either Britain or Holland. Based on the location of the seamlines, the bottles belong to the early twentieth century AD. Seamlines found terminating below the collar line are dated to the period before 1910 while bottles with seamlines that run through the body and the collar to the lip were made after 1910 (Hedges 1989, p. 13).

Figure 6.32: Beer bottles

These types of bottles could also have been used in bottling locally produced lemonade or soft drinks. In the 1930s several bottling companies were set up in Ghana, for example, Accra Breweries which produced Club Beer among others, and these bottling companies produced bottles for bottling lemonade and sweet soft drinks; however, beer bottles could have been imported also. Although the crown capped bottle was invented in 1881 and patented in the U.S.A. by William Painter in 1892 (Jones and Sullivan 1989, p. 163), it did not achieve much popularity until 1914 to 1918 (Roger 1978, p. 41). Some local people in Accra were also in the business of collecting and selling all manner of bottles, (for reuse) including beer bottles. A typical one is *Jan Abodiabo Wem* (Jan Bottle House [in Ga language]) located in James Town in Accra (pers. Com. LB Crossland 10th April 2015). For this reason, some of these bottles could have been traded by these bottle dealers, thereby putting them into secondary context.

Bitters

Bitters are an aromatic flavouring agent made from infusing roots, barks, fruit peels, seeds, spices, herbs, flowers and botanicals in high proof alcohol, and they were generally considered essential elements in a cocktail (Parsons 2011, p. 10). Bitters were considered a type of medicine and derived their name from bitter tasting roots and herbs that they were made of. Around the eighteenth century, bitters were mixed with water, ale and spirits with the intention to cure different types of ailments (Polak 2016, p. 108). Due to the claims that the concoctions contained medicinal properties, bitters gained worldwide popularity partly because of the fact that the English colonists could import them and avoid the payment of liquor tax.

While some bitters had low alcohol content most brands have higher alcohol proofs. When even physicians came to believe that the mixture could be used for healing, consumption of bitters invariably became socially acceptable attracting even non-liquor drinkers. Some of the best known bitters were Hostetter Bitters, Drakes Bitters and Angostura bitters. All these brands were believed to contain medicinal properties able to heal dysentery, diarrhoea, chills and fever, liver ailments, and pains and weakness associated with old age. The bottle fragments illustrated from Fredeikssted are green cylindrical bottles with ANGOSTURA BITTERS written at the base. Angostura bitters

were invented in 1824 and this brand is one of the most well-known and widely used bitters in the world (Bitterman 2015, p. 4; Parsons 2011, pp. 10-11).

Figure 6.33: Bitters bottles: (Angostura Bitters)

Angostura bitters were originally invented in Angostura, Venezuela by German physician Johann Gottlieb Benjamin Siegert who studied medicine at the University of Berlin and served as a surgeon under Gebbhard Albrecht von Blücher (Prussian army commander) at the battle of Waterloo and later immigrated to Venezuela in South America. The bitters, which contain 44.7% alcohol, were made from a mixture of gentian roots, rum and other ingredients as a stomach tonic, to heal debility and loss of appetite in the tropics. However, Angostura Bitters gained outstanding popularity and global ubiquity in its use as a cocktail ingredient and to make pink gin in the twentieth century (Nordegren 2002, p. 69). Its presence at the Frederikssted plantation site can be described as part of alcoholic/medicinal inventory on the plantation and is attributable to the occupants of the plantation area from the 1820s, who could be local occupants during the post plantation period.

6.3.2.2. Food Related Bottles (Sauce and Pickle Bottles)

These types of bottles usually make up one of the largest categories of the food related bottles. They are characterised by a wide mouth and square or cylindrical shape. Apart from their unique shape and design, sauce and pickle bottles also have almost exclusively aqua colour.

Figure 6.34: Sauce bottles (A&D) and pickle bottle (B) while (C) is a stopper

However, they can occasionally exhibit different colours (Polak 2010, p. 150). Some of the common food bottles were Worcestershire sauce bottles which were distributed by Lea and Perrins and the Heinz sauce bottles. The Worcestershire sauce packed in green bottle was in high demand during the nineteenth century and became quite common and pickles were also common and much admired food (Polak 2010, p. 150) while bottled horse-radish sauce introduced by Henry J Heinz in 1869 also enjoyed high patronage. The fragments recovered from Frederikssted comprise large mouth aqua colour cylindrical bottles with round bases, and most likely capped with round glass stoppers as some of the glass stoppers were found in association them (food bottles). However, they are without labels and embossments and therefore it is difficult to identify the exact content of the bottles and the bottle manufacturer(s).

Glass stoppers

A stopper is a plug which is inserted into the neck or the bore of a vessel to effect a seal from within the vessel (Jones & Sullivan 1989, p. 149). The adoption of the glass stoppers was meant to replace corks for bottle closures due to the cost involved in producing corks and the variations that came with the finish or the aperture of the bottle neck (Schulz et al 2016, p. 360). Glass stoppers are made up of two main parts –a shank, which is the plug, and a finial, which is the area where the stopper is held for closure and removal – but these two parts could be joined by a neck. Sometimes the shank could contain screw

threads to facilitate twisting into the neck in order to prevent the stopper from falling into the vessel and its contents. The top or finial flaring portion of the stopper may rest on the lip of the container so as to be firmly placed and enhance airtightness which in turn can prevent evaporation and exposure to contamination. The types of glass stoppers recovered from Frederiksted have been identified as Eno's-type, Club Sauce, screw thread stopper and Ground Shank stopper.

Eno's-type: This stopper is usually found with Eno's Fruit Salt bottles. Eno's Fruit Salt was manufactured in Britain in 1852 by James Crossley Eno (Campbell 1966). The bottles contained a powdery medication that was mixed with water and then drunk to relieve heartburn, stomach upset, and dehydration. It usually contained sodium bicarbonate, citric acid and sodium carbonate, which was sold in different fruit flavours.

Figure 6.35: Eno's stoppers

The mouths of Eno's Fruit Salt bottles are larger than normal small mouthed containers but can sometimes be smaller than some jars. The stopper can be seen as an enlarged form of the club sauce stopper in that it has a circular top, horizontally oriented, a tapered shank, and no or very short neck. The Eno's stopper type usually has a short and tapered shank, a large flat circular depression in the centre of the top. The sides of the top are flat, with raised band around the depression reminiscent of a mushroom shape.

Club sauce: This stopper is used for small mouthed bottles. It is typically circular at the top and horizontally oriented. Sometimes there is a depression in the centre of the top which may carry the inscription 'Lea & Perrins' at the depression, but the top can also be flat without a depression. The sides are flat and the underside of the crown/top is also flat. It has cylindrical and tapered shank and has no pronounced neck between the shank and the finial (Jones & Sullivan 1989, p. 152).

Figure 6.36: Club sauce stopper

Club Sauce stoppers have often been found in association with other sauce bottles and has been used to identify the club sauce created by Henry Bain**,** as condiment for meat at the Pendennis Club in Louisville, Kentucky around 1881 (http://www.atasteofkentucky.com/shop/henry-bains-famous-sauce-from-pendennis-club, 16/06/16). The club sauce stopper is also known to be a tough artefact, making it survive in the archaeological record, and they have often been excavated intact.

6.3.2.3 Mineral Water Bottles

These are short necked cylindrical bottles with flat bottoms, capped with ceramic closures and fastened with copper wire to flip open. The whole bottle (A) and one closure (C) bear the inscription Wasser Steinike & Weinlig. The other closure (D) bears the inscription J. FERD. NAGEL SÖHNE HAMBURG, all of which are of German origin. J. FERD. NAGEL SÖHNE was a distillery company based in Hamburg, Germany. In 1859 Jakob Ferdinand Nagel founded his eponymous company initially as a glass factory and it later became a distillery factory which manufactured gin and packed it in square bottles, some of which were exported to Ghana, for sale (Vermeulen 2013, p. 1). It is therefore probable that some of the closures were used on mineral water bottles as well as soda bottles or other distilled or brewed products from the company.

Figure 6.37: Mineral water bottles

Short necked flat bottomed mineral water bottles with similar closures intact with iron wire clips and embossed with the name MIN. WASSER VON STEILINK& WEILIG were excavated at Fredericksgave plantation (Seseme) by Bredwa-Mensah and Crossland (1997; Bredwa-Mensah 2004, p. 217) and at Wulff's House at Osu, Fort Crevecoeur Dutch Accra, Ayawaso, James Town (LB Crossland, pers. Com. 10th April 2015).

6.3.2.4 Tableware

Wine glasses: Wine glasses come under the generic name *stemware* which is largely associated with drinking different types of alcoholic beverages. In spite of the fact that wine glasses were socially and aesthetically superior to tumblers, they are less costly (Jones & Smith 1985, p. 36). Both wine glasses and tumblers were actually used at the table at the same time but they were appropriately assigned different functions. Varieties of wine glasses were manufactured in Europe from the seventeenth century. The fragment illustrated on Figure 6.21*a* has a bowl shape that is ovoid, straight, joining with a smooth stem drawn from the bowl with two rudimentary knobs forming the collar (joining the neck to the bowl area) and one rudimentary knob forming the step (joining the base and the stem) and a plain conical foot (base). This form is likely to have been produced during the eighteenth century, around the 1750s and 1760s (Jones & Smith 1983, p. 40).

Figure 6.38: Wine glasses (a) and tumblers (b)

Figure 6.39: Wide rim wine glass

b. Tumblers: Tumblers are usually considered drinking vessels and they come in various shapes and sizes. They are commonly characterised by a flat or shallow concave base, a plain rim, and a circular horizontal cross section. In terms of shape, tumblers can be cylindrical, tapered, flared, or barrel-shaped (Jones & Sullivan 1989, p. 143), and for the most part they are undecorated.

Tumblers are likely to have been manufactured around the late eighteenth century (Jones & Smith 1983, p. 35; Decorse 2001, p. 162). Figure 6.38b comprises two tumblers. One is a tumbler with cylindrical tapered body, with fluted decorations resulting from pattern-moulded technique and slightly waisted at the base, which was a common feature in the eighteenth century, occurring on several sites ranging in date from the 1750s to the early nineteenth century (Jones and Smith 1985, p. 36). The other tumbler is a plain (undecorated) conical tumbler. Even though the fragments cannot be reconstructed it appears bit elongated with slightly pushed-up base, most probably used in drinking water.

Decanters

A decanter is a glass vessel generally characterised by a narrow mouth and narrow neck and used for serving and/or storing alcoholic beverages, and is usually designed for re-use (Jones & Sullivan 1989, pp. 133-134). Decanters in most cases are decorated in various motifs and occur in a variety of body shapes and sizes. Some decanters have stoppers while others have not. Decanters were manufactured and added to the bottle inventory in England between 1700 and 1830. These were commonly three-ring decanters, characterised by three neck rings. To decant meant that liquid was to be poured from one receptacle into another in order to leave behind dregs or sediment, and this was done by tilting or 'canting' the container.

By the end of the seventeenth century the practice of decanting and the associated bottle decanters came to imply pouring alcoholic drink from a storage (original) vessel into another bottle vessel (decanter) for serving at table. Therefore, bottles made for the purpose of decanting came to assume the name *decanters* (Davis 197, p. 18). George Ravenscroft is credited with having played a pioneering role in making the earliest forms of decanters during the late-seventeenth century, which he called 'bottles'. The decorations embossed and printed on them suggested that the decanters were intended to serve as both decorative as well as utilitarian vessels (Davis 1972, p. 18). Most decanters have both cylindrical and globular ovoid bodies and various sizes of necks and mouths. The fragments illustrated come from a white globular bodied decanter with broad floral designs.

Figure 6.40: Decanters

6.3.2.5 Other Containers

Glass materials related to this category are syrup bottles, containers for toiletries/perfumes and body creams and their stoppers, and containers for medicines and poisons.

Syrup bottles

Syrup bottles were made in the nineteenth century and called *syrup bottles* by British collectors. Syrup bottles mostly contained castor oil for medicinal purposes, usually used as a purgative (Fletcher 1975, p. 44). The fragments illustrated (Figure 6.41) are of aqua clear glass (*A*) and cobalt blue (*B*) bottles with jagged sheared lips with no embossment and are from narrow cylindrical bottles with tapered necks.

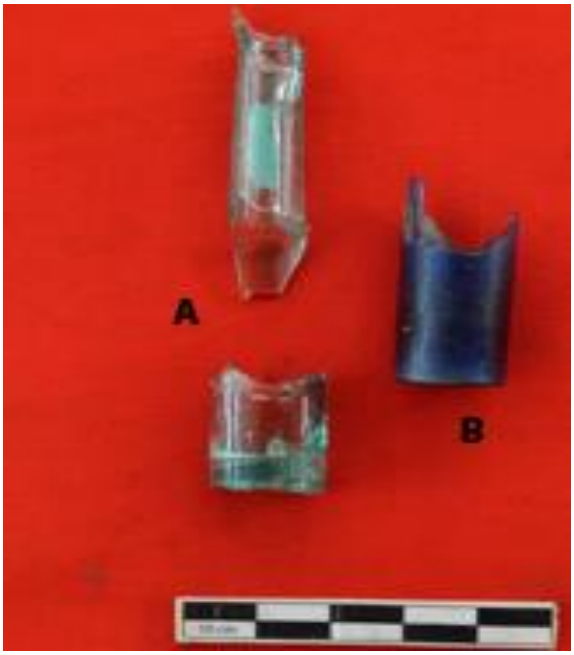

Figure 6.41: Syrup bottles

Perfumes

Making perfumes or perfumery involves extracting, blending and preserving the essential oils of plants and other scented substances which can be applied on the human body. According to Shuman (2003, p. 78), a desirable perfume is usually composed of 10 to 15 per cent scented oil, other aromatic products and 85 to 90 per cent high proof alcohol. The aromatic element consists of essential oils (obtained by distilling the roots, leaves, flowers, and/or bark of plants), natural flower oils, synthetic and aromatic isolates, vegetable gum and resins and some animal products. The use of perfumes dates back to

the prehistoric times and various cultures have used them for different purposes such as medical purposes for healing, religious/ritual purposes, and for personal enhancement when used on the body (Walker 1987, p. 3). Since perfumes are always expensive to produce, bottle manufacturers have also made special bottles to contain them. The nineteenth century in particular was a period of experimentation by bottle manufacturers. Numerous bottle makers made decorative bottles in various shapes, sizes and colours. Some of the bottles were fitted with atomizer nozzles which turned the liquid perfume into fine spray, while others were capped with various types of stoppers and lids, and elongated applicators (Shuman 2003, p. 78).

Figure 6.42: Perfume bottles

Bottles identified as perfume bottles from Frederikssted are of three types. Figure 6.42*A* is a cylindrical bottle with collar, but the mouth area is broken. It bears the inscription *Parfumerie*, probably of French origin. *B* is a cathedral shaped aqua-marine coloured glass with two rings along its elongated neck. According to LB Crossland in personal conversation, this type of bottle has been identified by elderly women of James Town and Ussher Town in Accra as a bottle that contained 'ŋlongo' (scented oil) which was used as an additive, and mixed with shea-nut butter for use as body cream. It suggests that the oil and the bottle came from Europe but were combined with local ingredients by local people. It may have originated from England, France or Denmark in the late nineteenth century and the early twentieth century as it is a common bottle associated with late

nineteenth century coastal sites of Ghana. *C* is a square bottle with a collar at the neck and ring rim, likely to have a threaded stopper.

Perfume glass stoppers

Ground shanks - Grinding the shank of a stopper is done to achieve a precise fit between it and the bore of the neck of the vessel. If the airtightness is not desirable, then the shank of the stopper can be ground down to precisely fit the bore of the bottle. The bore, on the other hand, can also be ground so that it could precisely accommodate or accept the shank of stopper. Due to the fact that each stopper is ground to fit the bore of the container with which it will be used, each stopper always appears to be uniquely fitted to a particular vessel. Grinding of glass stoppers has been noted as early as 1665 but apparently it became common practice in England in the years around 1745 (Jones & Sullivan 1989, p. 156). The ground shank stopper recovered from Frederikssted has been identified as perfume bottle stopper with unidentified finial.

Figure 6.43: Ground shank stopper

Screw-thread stopper: This stopper has its shank threaded so that it could be thread-twisted into a hollowed bore. In the case of Figure 6.44, it combines threaded shank and disc finial, and it has been identified as a perfume stopper whose threaded shank was twisted into the bore hole of the bottle.

Figure 6.44: Screw-thread stopper

The disc finial is a vertical flat circle, and the shape is sometimes referred to as the "wheel" which was manufactured around the late nineteenth century (Jones and Sullivan 1989, p. 155). The flat circle finial is the portion that is held to twist the stopper in and out of the vessel. There is a collar at the base of the neck which acts as a stop and sits on top of the lip. As a perfume bottle, the closure is intended to be airtight to keep the content always scented. The glass stopper is always twisted out or removed to pour out the contents after which it is put back in place; however, in case of loss or breakage the stopper cannot be replaced.

Creams/body lotions

Vessels which contained body creams (Figure 6.45) have relatively shorter necks and broader mouths. The broader mouths were designed to facilitate dipping of the fingers in the bottles for scooping. They are all characterised by threads at the outer part of the neck which suggests that they were capped with threaded lids. Apart from *A* which has diagonal rectangular designs, *B, D* and *E* have smooth bodies while *C* is a fragment of threaded neck. These pomades may have originated from Britain or France.

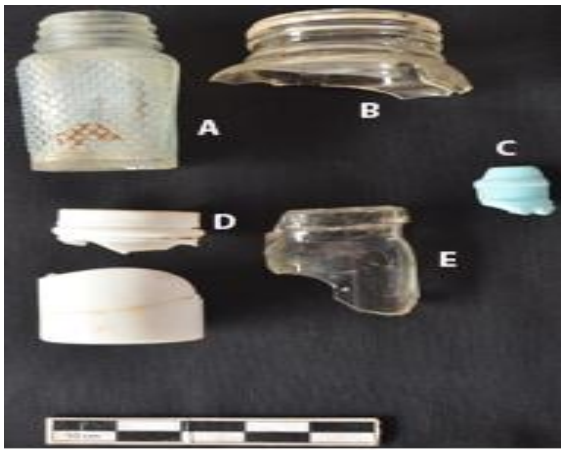

Figure 6.45: Body cream/lotion bottles

Medicine bottles

The use of glass containers, especially tapering bottles, as receptacles for medicine is an age old practice since the medieval times. In 1597 medical bottles began to be manufactured by John Le Alemanye in Britain (Hedges 2002, p. 15). In the earlier times medicine manufacturers or apothecaries preferred square sectional case bottles and dark green globular bottles and these types became standard medicine bottles even during the twentieth century. As patent medicine was introduced towards the end of the eighteenth century, medicine manufacturers made and sold their products in these special, easily identifiable bottles. In the early nineteenth century when hinged moulds were introduced, chemists developed the practice of embossing the contents and dosages, and in some circumstances their own names on the bottles for easy identification (Hedges 2002, p. 15; Jones & Sullivan 1989, p. 47). During the Victorian era, English chemists adopted the use of acid etched cylindrical bottles to stock patented medicines. This enables archaeologists to easily identify these bottles when they are recovered in any excavations. Frederikssted excavations yielded bottle necks that have been identified as medicine bottles. They bear no identifiable features apart from their short necks and ring lips. Because medicine bottles have different shapes, and are usually known as flats, rounds, panels, or ovals (according to their shape), it is difficult to determine the shapes of these medicine bottles recovered from Frederikssted plantation site.

Figure 6.46: Medicine bottle

Poison bottles

Poison bottles, by the very nature of their contents, are a very distinctive type of bottle. Due to many instances of accidental poisoning, the American Pharmaceutical Association in 1853 passed a resolution and recommended that laws be passed requiring identification of all poison bottles. In 1872 the same organisation recommended that poison bottles be identified with rough surface on one side and the word *poison* on the other. However, it

so happened at that time that the passing of the law became problematic. The manufacturers therefore were making whatever they wanted because there were no standards established. A wide-ranging group of bottle shapes, sizes, and patterns were manufactured, some of which included the popular skull and crossed bones or skulls, leg bones, and coffins (Polak 2102, p. 316). So the idea of introducing three crosses (indicating poison) on the label of drug or poison containers was introduced into various pharmacopeia in the 1800s. The practice was mostly applied in Denmark where the *Pharmacopeia Danica* stated "drugs marked with +++ must be kept together and they shall be separated from other drugs" (Griffenhagen & Bogard 1999, p. 91). The bottles that were manufactured initially were characterised by quilted or ribbed surfaces as well as diamond/lattice type patterns for easy identification by touch.

Figure 6.47: Victorian poison bottles

Most of the poison bottles were made in dark shades of blue, brown and green in order to serve as another form of identification aid. Griffenhagen and Bogard (1999, pp. 91-92) have also noted that specially shaped containers for poisons were in use in Europe and America as early as the eighteenth century. They were specially designed as a protective method to prevent accidental dispensing of poisonous substances in pharmacies and accidental ingestion of poisons by humans at home. In the mid-1800s a number of English patents were granted for the purpose of modifying and improving the nature of the poison bottle so that pharmacies could clearly distinguish between the containers of poison substances and those of innocuous substances and also to make the use of poison bottles compulsory (Griffenhagen & Bogard 1999, p. 92).

Two bottle fragments from Frederikssted have been identified as Victorian poison bottles as they are characterised by a dark green colour with vertical striations. Some of the initial

Victorian bottles were manufactured in attractive cobalt blue glass bottles as a warning that blue colour meant danger and the dark glass also protected the content from the effects of sunlight. According to Dale (2012, p. 12), because many people were illiterate in the 1800s, English bottles containing poisonous substances were made with ridges and grooves on them in addition to the words such as ‘poison’ or ‘poisonous’ or ‘NOT TO BE TAKEN’ engraved on the other side of the bottle (Hedges 2002, p. 16). This makes it possible that even in dim light they could still be identified by touch even by an illiterate person. The Frederikssted poison bottles could have been used to control plants and vermin, and as surface cleaners.

6.3.2.6 Other Household Glass Items

Mirrors

Mirrors have been classified into a category of glass known as *flat glass* which also includes window glass. Mirrors are made from plate glass, and the production process is by casting molten glass on huge metal tables. The resultant plate glass is then polished on both surfaces before finally silvering to produce reflective images. It can also be back painted, gilded and framed. In Europe, plate glass was produced in the seventeenth century beginning in France in the 1660s, and in England, plate glass production witnessed a boom in the late-18th century.

Figure 6.48: Mirror fragments

In most archaeological sites, plate glass fragments that are recovered belong to mirrors (Jones & Sullivan 1989, p. 171) and the wooden frames do not survive. Mirror fragments recovered from Frederikssted were identified through the traces of the silvering as well as remnants of the back painting which is in brown colour. The silvering and the thickness

(thin) of the glass in particular make mirror fragments distinguishable from window glass fragments, which are sometimes also found on archaeological sites.

Lantern shades

The fragments of lantern shades recovered from Frederikssted were associated with illumination devices used on the plantation site. The completely clear lantern shades, which are in different shapes and sizes, were generally fitted in lantern frames, fuelled with kerosene or lamp oil and used as general light sources for outdoor and indoor areas at night.

Figure 6.49: Lantern shade fragments

Jones and Sullivan (1989, p. 31) recount that different types of lighting devices such as lantern shades and lamp chimneys were manufactured in the nineteenth century by turn moulding (the practice that allowed the bottle to rotate in the mould to rub out the seams and give the bottle a smooth body).

6.3.3 European Beads

Beads were likely one of the major trade items brought by the Portuguese, who arrived on the coast in the fifteenth century. Beginning from the 1600s a number of European traders arrived in West Africa and dominated the West African maritime trade. Some of the trade items included beads. European imported beads traded in West Africa eventually suffocated the indigenous bead industry. The European merchants traded beads such as Venetian, Dutch, and Bohemian glass beads. Some of the specific bead varieties traded in West Africa were *aheyne coffe, olevetjes, madrigettes,* and *paternosters (*Van Dantzig

1978, p. 32; DeCorse 1989, p. 43). It is for this reason that European glass beads have been commonly found in most archaeological excavations in Ghana. Anquandah (1992b, p. 35) has documented a number of Venetian rosette beads from seventeenth century context at Dangbe-shai site at Adwuku Hill in close proximity to Dodowa. DeCorse (1989, p. 45) has also recounted that over 30,000 European glass beads were excavated at Elmina old site, all of which have been ascribed to nineteenth century context. These were closely dated by associated European trade materials. Bredwa-Mensah (1996), during his excavations at the Danish plantation site at Bibiase (Bibiase plantation), recovered a variety of imported beads some of which include polychrome glass beads of Venetian and Dutch origins, blue *aggrey beads* (most likely early imported glass beads) and Carnelian beads believed to have been made in the mid-nineteenth century.

DeCorse et al (2003) have also offered a succinct typological analyses of 474 European made beads from Falemme in Senegal. This was done for the purpose of presenting a systematic classification system for the analysis of beads from any archaeological context. Another important study undertaken to study glass beads is that of Karklins (1985). Karlis Karklins' study was based on the "Levin Catalogue" and the "Venetian Bead Book". Undoubtedly, the "Venetian Bead Book" is particularly significant for analyses of beads in West Africa because it describes Venetian beads which were part of the trade items in West Africa. Imported beads have been dated on the basis of associated ceramics. This gives a close chronological control capable of determining the temporal distributions of different bead varieties and assessing their value as chronological indicators (DeCorse 1989 p.45).

Frederikssted imported beads

Imported beads found in Frederikssted excavations numbered 102. These foreign beads are believed to have been imported from Europe and Asia. Most of the imported beads have been dated to the mid-nineteenth century, originating from Venice, India, and Bohemia. The Frederikssted imported beads analysed in this thesis incorporate information on manufacture, colour, decoration, measurement, shape, origin, date, and complemented by a written description of other physical attributes. The imported beads recovered from the excavations (Table 6.25 and 6.26) have been identified as Prosser beads, drawn beads, Carnelian stone bead, Venetian wound beads, and Blue heart bead.

Locus	Unit	Level	Prosser beads	Drawn beads	Carnelian stone bead	Venetian wound bead	Blue heart bead	Total
Locus 1	4	Level 3	8					8
Locus 2								
	Unit 1	Level 1						
		Level 2						
		Level 3		15				5
		Level 4		16				14
		Level 5		21			1	23
		Level 6	3	17	1	1		24
		Level 7		12				24
		Level 8		7				4
Total			**11**	**88**	**1**	**1**	**1**	**102**

Table 6.25: European beads by locus, unit, and level

Bead type	Origin	Date	Number
Prosser beads	Bohemia	Mid 19th C	11
Drawn beads	Venice	19th C	88
Carnelian stone bead	India	18thC	1
Venetian wound beads	Venice	1600s	1
Blue heart bead	Bohemia	19thC	1
Total			**102**

Table 6.26: Types of imported beads, origins and dates

Prosser beads

Prosser beads were part of the European trade beads that were traded in West Africa in the nineteenth century. The Prosser beads were mainly in the form of ceramic and glass beads. This type of beads was produced by technology invented by the Prosser Brothers, Richard and Thomas Prosser, who initially invented a button-making machine to manufacture buttons in moulds in the 1830s in Bohemia. However, by the 1860s the same technology was used to manufacture beads, which become known as Prosser beads (Francis 1994, p. 58; Geary 2008, p. 237).

The Prosser machine subjects a pellet of clay mixed with other ingredients to great pressure in a mould. The pressure from the machine then vitrifies the clay and the finished bead is precisely in the form of the mould. Prosser beads will always have seams but in

most cases these are inconspicuous (Karklins 1985, p.104). Prosser beads appear in different sizes and shapes such as round, cylindrical, and interlocking beads. The round Prosser beads always have a thin seam, hidden on the edge of an equatorial band, or sometimes the seams are tumbled away. Prosser beads are always uniform in shape and size, and have opaque or cloudy body.

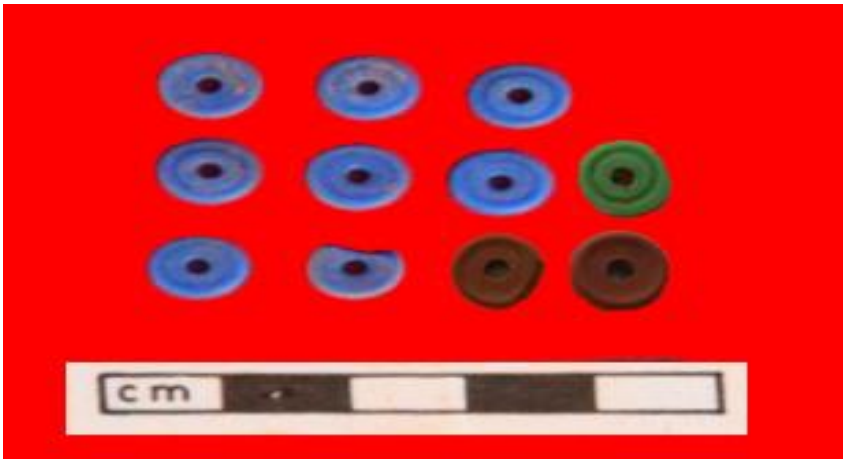

Figure 6.50: Prosser beads

The Prosser beads recovered from Frederikssted excavations were all round, and they were 11 in number, 8 blue, 1 green and 2 brown. They all measure 4mm each in diameter. The 8 (blue) were excavated from Locus 1, Unit 4, level 3, while the green and the brown were recovered from Locus 1, Unit 1, Level 5.

Drawn beads

Drawn beads, according to Karklins (1985, p.11) are made by many techniques of drawing or pulling a tube of molten glass to make it long and thin. Drawn glass beads are usually made from plain or multilayered tubes before they are pulled or drawn (Karklins 1985, p.11). The molten glass must also have a bubble in the centre to serve as a hole in the finished product. After the glass is pulled or drawn, the glass is cut into small pieces or discs after which the pieces are heated and tumbled or polished to create the finished beads. Drawn beads excavated from Frederikssted comprise small and relatively large beads of monochrome and polychrome appearance.

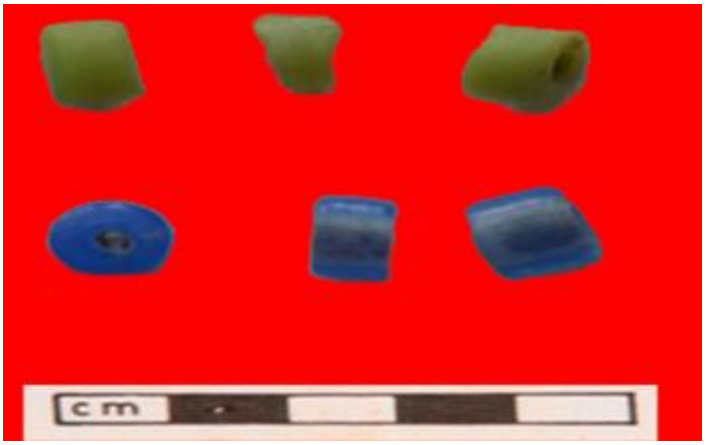

Figure 6.51: Small size monochrome drawn beads

The monochrome (Figure 6.51) drawn beads which were excavated from Locus 2 Unit 1 consist of 6 pieces, of which 3 are yellow and 3 are blue, all measuring about 5mm in diameter.

Figure 6.52 shows tubular drawn beads in different colours of blue (*A*&*C*, 2.5cm) white (*B*, 2.5cm) and sage green (*D*, 7mm). The broken pieces are curved, giving an indication that the finished beads were probably round or circular in nature.

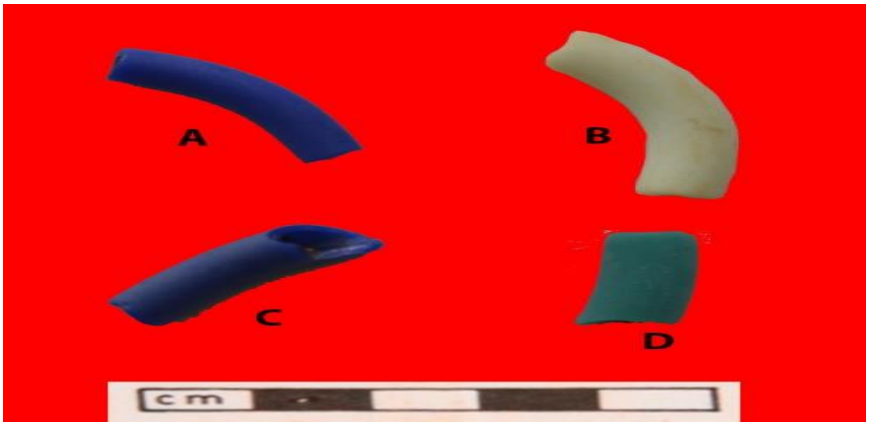

Figure 6.52: Tubular monochrome drawn beads

The polychrome drawn glass beads consist of relatively larger beads than the monochrome type. As the name suggests, the surface decorations of the polychrome beads are characterised by multiple colours. The beads are decorated with different colours of glass to produce trailed lines of different colours. Moreover, prepared fancy colours can also be applied to the entire surface of the beads. This multiple colouration is usually referred to as *millefiori* (for "a thousand flowers" in Italian) or mosaic bead. w

A and *B*, which are drawn tubular beads (8mm in diameter), are striped with red and blue lines on yellow and white backgrounds.

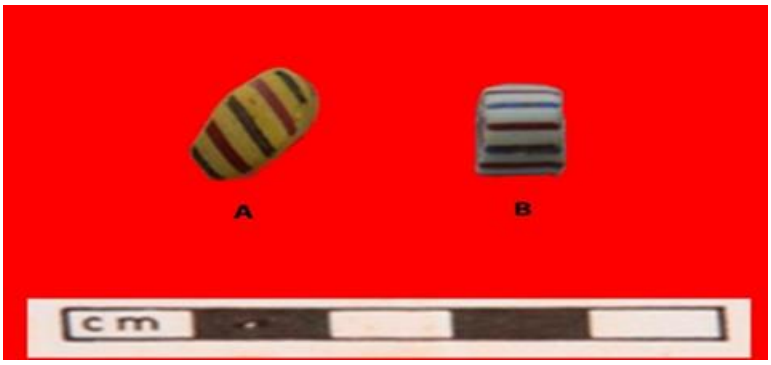

Figure 6.53: Striped drawn beads

In figure 6.54 *A* (1cm) and *B* (7mm) are striped with white, red, and blue lines on yellow background and *C* (6mm) shows white and dark-brown lines in green background. In Figure 6.54, *D* is, however, different with yellow dots in green background on 1cm bead, while *E* (1.5cm) has oblique white stripes on Green background.

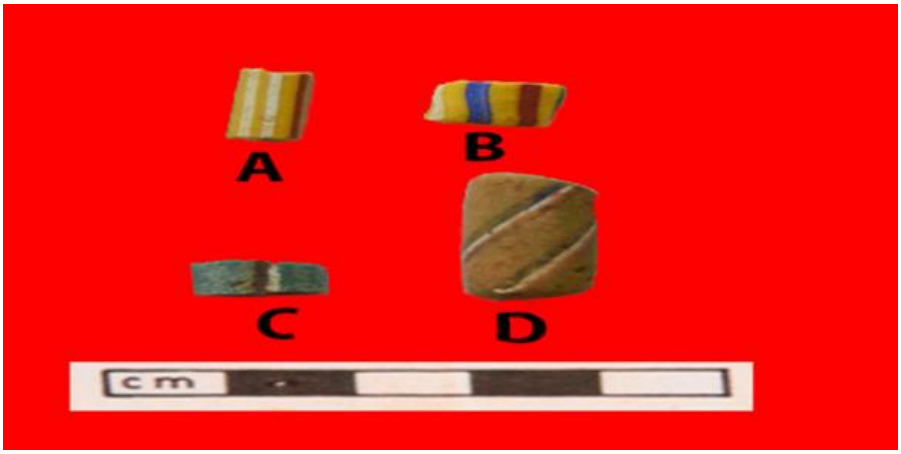

Figure 6.54: Other drawn beads

Monochrome drawn cylinder beads

The beads in this category (Figure 6.55) are also drawm beads made up of three yellow (A, B, C) cylindrical opaque yellow glass beads and one brown (D) cylinder glass bead. All the beads have relatively large perforations and measure 1.5cm in diameter. They were recovered from Unit 1, Level 5 of Locus 2.

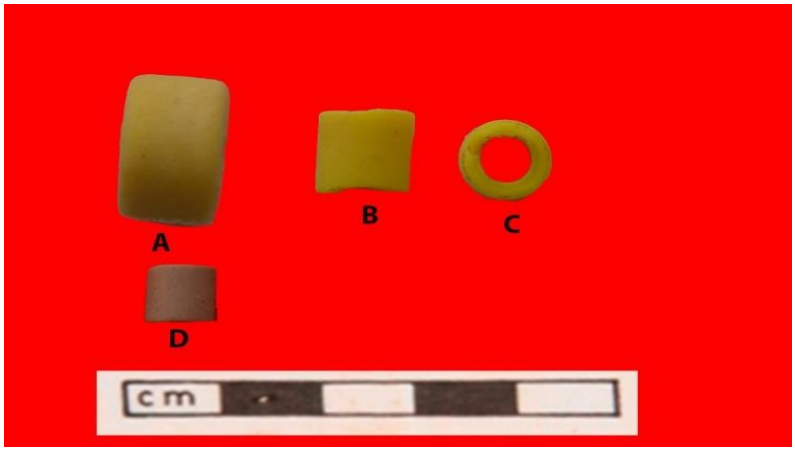

Figure 6.55: Monochrome cylinder drawn beads

The yellow beads were made by adding coal to the glass batch. However, in the 1860s, cadmium sulphide was introduced in order to make the beads bright imperial yellow, which was different from earlier ones, which had softer shades. Due to their vivid yellow colour, the yellow beads illustrated most likely originated from Bohemia in the mid-nineteenth century when uranium was included in bead baking to enhance the colour of the beads. The brown (D) may have also come from Bohemia.

Carnelian bead

Carnelian bead is made by chipping a raw carnelian pebble into a rough-out and then grinding it into a *blank*. The *blank* is then perforated, polished, and heated to bring out the red colour (Karklins 1985, p. 30). Sources of carnelian have existed in India since at least 500BC and it has been an important bead material ever since (Francis 2002, p. 117). The carnelian bead found in Frederikssted excavations is a brown pendant carnelian stone bead. The pendant has four sided rectangular pyramid shape, found in Unit 1 level 6 of Locus 2. The carnelian pendant also has an elongated pyramid shape with a suspension hole through the tapering top. Its well-polished surface gradually narrows towards one end. It is likely part of the bead repertoire that Europeans traded in West Africa during the eighteenth and nineteenth centuries.

Figure 6.56: Carnelian bead

Wound beads

Wound beads in the view of Karklins (1985, p.19) are made by heating a preformed glass rod from a concentrated heat source. The soft or the molten glass is wound around a mandrel. Since wound beads are usually not easily detachable from the mandrel, the mandrel is often coated with a separator or bead remover to help release the bead, leaving a perforation in the middle of the bead.

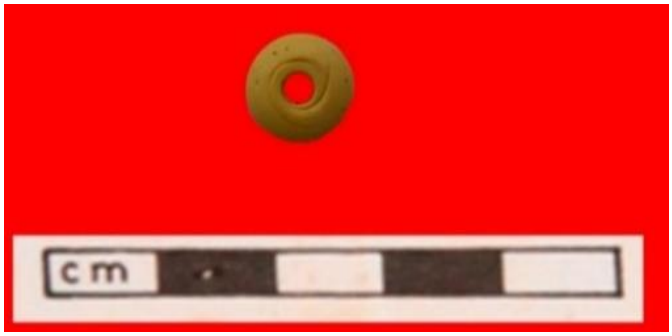

Figure 6.57: Venetian wound bead

It is typical of the Venetians to round their beads with a tong mould or roll the beads in a rut, which often leaves some of the wound/round element on the surface of the bead (Francis 1994, p. 56). Shaping of the bead is done by the use of a bat to achieve the desired shape before it may be decorated. The Frederikssted wound beads are represented on Figure 6.56 and and Figure 6.57 respectively. Some Venetian beads are rounded but the bead on Figure 6.56 is a single disk/discoidal in shape. It is yellow in colour with whirling

features around the perforation. The bead is most likely Venetian and of nineteenth century origin (DeCorse 1989).

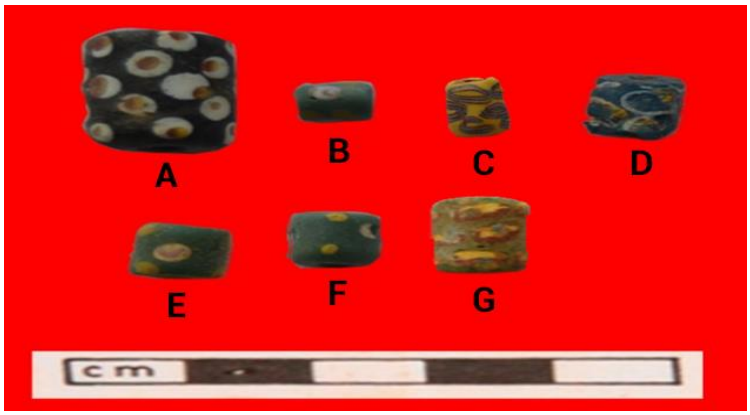

Figure 6.58: Other wound beads with Polka dots

Figure 6.57 has 7 exmples of wound beads. *A (*1.9cm) has white polka dots on green background on its entire surface while *B, E, F,* and G measuring 75mm each, have a mixture of yellow and white polka dots on green background. *C* which is a cylindrical bead (1cm in length), shows twirling decorations in red, white, and blue lines on yellow background while *D* has prussian blue colour with white circular decorations applied on the polished surface. It has been identifies as Venetian/Murano wound bead with nineteenth century origin (Decorse 1989).

Blue heart bead

The one blue heart bead was excavated from Unit 1, Level 6 of Locus 2; it measures 1cm in length. It was possibly produced in a mould as mould seams can be observed on both left and right corners. Moulding and pressing techniques for bead manufacturing were perfected in the nineteenth century and machines were in common use by the early twentieth century (DeCorse 1989, p.46). It is possibly one of the numerous nineteenth century Bohemian beads, and may have been part of the bead repertoire traded in West Africa by European traders in the nineteenth century.

Figure 6.59: Blue heart bead

6.3.4 European/ Imported Smoking Pipes

Based on the presence of pipe fragments, smoking was a common activity at Frederikssted plantation site. The excavations recovered 32 European tobacco pipe fragments.

Figure 6.60: European smoking pipes (bowls & stems)

Figure 6.61: European smoking pipes (stems)

The European tobacco pipes, which were white in colour, comprise 29 pieces of stem, 1 whole bowl with short stem attached, and 2 bowl fragments. None of the pipes carries any marks denoting its origin or date of manufacture except 1 (Figure 6.62) stem which bears the figure *343*. The stamped number (likely a catalogue number) parallel to the stem and the bowl form are both diagnostic of the nineteenth century/probably the second half or last quarter of the century DeCorse 2001:164).

6.3.5 Cowry Shells

Cowries are part of the marine gastropod molluscs in the family of *Cypraeidae*. Often, the word *cowry* is used to refer to the shells of these sea snails. The shape of the shell is ovate but the underside is flat (Burgess 1985). The surface of the shell looks polished and smooth. The underside has a long and narrow opening that extends almost to the full length of the shell. Both ends of the shell are characterised by short channels referred to

as *anterior and posterior canals* (Poutiers 1998, p. 486). The two lips at the base are also characterised by series of slanting ridges or teeth. The outer lip/teeth is thick and incurved while the inner lip is shallow with a longitudinal furrow found towards the front end.

Two types of cowry shells (*Cypraea moneta* and *Cypraea annulus)* have been identified as the types that were brought to West Africa to serve as currency and later the locals used them as divination objects (Bascom 1993). *Cypraea moneta is* usually identified by its comparatively rounded shape and series of ridges or teeth at one end of its upper surface, whereas *Cypraea annulus* has more oval shape and lacks the ridges displayed in *Cypraea moneta* (Shinnie & Kense 1989, p. 314). These species were/are commonly found in the waters of the Indo-West Pacific, from East Africa, including Madagascar and the south-eastern part of the Red Sea, to eastern Polynesia; north to southern Japan; and south to Queensland in Australia and New Caledonia (Poutiers 1998, p. 492). Twenty-three (23) cowry shells of *Cypraea moneta* type were retrieved from the excavations at the *Unit 1 Locus 2*. The use of cowry shells (*Cypraea spp*) as currency as well as for ritual purposes has been noted in most archaeological excavations in West Africa.

Figure 6.62: Cowry shells

Locus 2	Unit	Level	Number
	1	2	3
		3	4
		4	2
		5	5
		6	6
		7	3
Total			**23**

Table 6.27: Cowry shells

Both archaeologists and ethno-historians have explored the complex uses, roles, and symbolism of shell objects in different societies of the world. Shell objects have

functioned as prestige goods, used as ornamentation, wealth, marking status, and as ritual paraphernalia within different societies (Trubitt 2003, Swanepoel 2015, Johnson 1970, Hogendorn & Johnson 2008, Handler 1997). Undoubtedly, cowrie shells (*Cypraea moneta*) are the best known "shell money" which were collected from the Indian Ocean, shipped to West Africa and used in the slave trade between the sixteenth and nineteenth centuries. Cowries therefore became highly valued items in West Africa and were widely used as currency long before the colonial period.

Cowry shells retrieved from Frederikssted plantation site were 23 in number and they were all located in Unit 1 of Locus 2 (Figure 6.62). The cowry shells may have played a dual role of serving as currency as part of the trading activities on the plantation or as ritual paraphernalia associated with African world view systems by the Africans who lived on the plantation. The fact that Cyprea moneta, (money cowry) does not inhabit West African waters suggests that these shell artefacts often moved between different societies and across long distances, offering the opportunity for archaeologists and ethno-historians to explore regional relationships and the interactions between ancient societies and their effects on modern societies.

6.3.6 Slates and Slate Pencils

Education related material from Frederikssted excavation are few but significant. They include 20 slate pencils and 5 writing slate fragments.

Figure 6.63: Slate fragments

Two pieces of the slate (Figure 6.63) appear white while the other 3 appear dark-brown in colour. The slate pencils, which also appear black in colour, seem to have been broken

at one end while the other ends have an outline which suggest they were deliberately sharpened for purposes of writing. These materials provide indication of literate population at the Frederikssted plantation site. These were likely used for keeping records about business transactions and other activities that took place on daily basis at the plantation site.

Figure 6.64: Slate pencil and a piece of slate

6.3.7 Gun Cartridge

One gun cartridge was obtained from Level 2, Unit 2 of Locus 1. A cartridge comprises a primer (metal cap), propellant, projectile/pellets, and a case, which contains these components (House 2016, p. 7). The cartridge excavated and illustrated consists of plastic pellet case and a rimfire base. Louis Nicolas Auguste Flobert from France invented the rimefire ignitions in the mid-1840s to replace the *pinfire* system (Flatnes 2013, p. 12). The *rimefire* cartridge is fired by firing pin of the gun, which strikes and crushes the primer cap or the rim at the rear of the cartridge. At least the plastic pellet case places this firmly in the second half of the 20th century. The cartridge was likely to have been used in modern shortguns for hunting. Firearms have been used in Ghana both as muskets and for hunting. However, archaeological evidence show that firearms found on slave plantations in Ghana were used for hunting.

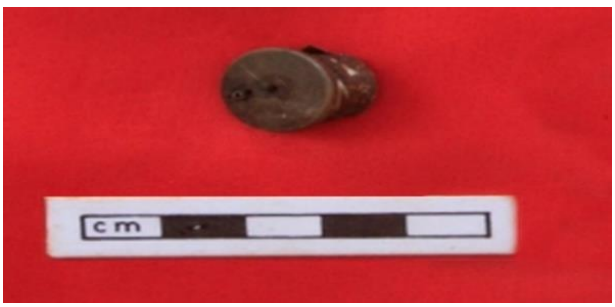

Figure 6.65: Gun cartridge

6.3.8 Clothing/Personal Items

Items in this category include seven buttons, three footwear buckles, one finger ring, and one coin. One of the buttons was plastic and was retrieved from Unit 3, Level 2 at Locus 1. The other 6 were metallic buttons retrieved from Unit 1 Level 3 of Locus 2, and were completely corroded and disintegrated. The coin and finger ring were all recovered from Unit 4 Level 3 at Locus 1, close to the main plantation building, while the three metallic objects which were identified as footwear buckles were retrieved from level 4 of Unit 4 at Locus 1.

Button: The only identifiable button from Frederikssted excavations consisted of a single utilitarian plastic button. Early production of plastic buttons began in England in the twentieth century (Hesse 2007, p. 37), and during the Second World War technological developments made it possible to make better plastic buttons especially for military uniforms (Alexander 2007, p. 8). Therefore, the single plastic button retrieved from Unit 3 Level 2 of Locus1 is of twentieth century or later date.

Buckle: The buckle usually remains the only surviving artefact of the shoe/footwear when buried in the ground to form the archaeological deposit. Buckles became prestigious items for men and were sometimes displayed with pride, and families handed them down to the younger generation. Buckles were sometimes made of semi-precious metals and they were also displayed on belts (which later were worn around the waist) and horse brasses (*http://allaboutshoes-toeslayer.blogspot.com.au/2011/12/shoe-buckles-brief-history.html 20/12/16*).

Buckles were generally manufactured in England and exported to other British colonies abroad. Buckles are part of the important items that were manufactured in Sheffield and Birmingham beginning from 1781 when the production of the large square buckles began, and later various geometrical shapes were made (Craik 1847, p. 686). The huge rosettes that characterised most shoes at the time were replaced by elegant buckles for both fashion and function (Condra 2008, p. 135). In 1788 there was a boom in the buckle market which created enormous demand for shoe buckles. Consequently, about 4000 to 5000 persons were said to have been engaged in the production of shoe buckles in

Birmingham and in neighbouring areas in 1788. In 1791, however, the use of buckles decreased drastically and the buckle market plummeted.

Some of the factors to which the reduction of the buckle market has been attributed were high price of copper, brass and tin and the disuse of buckle boots and shoes in the British army (Craik 1847, p. 686). The downturn in the 1790s coincided with the French Revolution when laces or shoestring to some extent replaced the prestigious buckles as well as shoes with rosettes and bows. The buckle obtained from Frederikssted excavations is a square buckle used on shoes, belts, or sandals, and it is likely a nineteenth century clothing buckle.

Coin: The coin, which is unidentified, has two perforations; the original perforation is found in the middle while the secondary perforation is situated at the periphery. The secondary perforation was probably made to string the coin which was used as a neck pendant worn by children as a healing device for different forms of childhood diseases.

Figure 6.66: Personal items: buckle (A), coin (B), button (C), finger ring (D)

Finger ring: The ring, which is made of copper, has a smooth round surface and may have been worn as a finger ring as part of bodily decorations.

6.3.9 Metals

A number of metal objects were retrieved from the excavations at both Locus1 and Locus 2. They comprise nails, screws and washers, padlock and keys, door hinges, brick hammer, axe, farm tools, barrel hoops, metal hooks, metal gong, sewing implements, metal balls for bed decoration, sardine and corned beef keys, musical instrument, kitchen ware and miscellaneous/unidentified items.

Metallic object	Locus 1	Locus 2	Date	Total
Building materials				
Nails (wire nails)	266	59	1804	325
Nails (screws with washers	31	21	19thc	52
Screw washers	15	10	19thc	25
Cast heart iron padlock	1		19thc	1
Padlock keys	2		19thc	2
Lock pad	1		18thc	1
Door hinges	2		18thc	2
Food related				
Sardines keys	21	4	1895	25
Corned beef keys	10	3	1866	13
Kitchenware				
a. Fork		1	1804	1
b. Knives		2	18thc	2
c. Spoon		2	1804	2
d. Handles of iron cooking pot		2	19thc	2
e. Handles of aluminium vessels		3	19th	3
Other tools				
a. Screws	31	28	19thc	59
b. Washers	15	10	19thc	25
c. Machete	2	1	19thc	3
d. Hoe blade	2		19thc	2
e. Brick hammer	1		18thc	1
f. Splitting maul	1		19thc	1
Other domestic items				
a. Sewing machine part		1	1851	1
b. Scissors		1	19thc	1
Metal gong		1	19thc	1
Bedknobs	3		20thc	3
Barrel hoops	10	24	18thc	34
Metal hooks	2		19th c	2
Miscellaneous	12	58	-	70
Total	**428**	**231**		**659**

Table 6.28: Metals and their probable dates

Locus 1																												
		Building related metals					Food related M		Kitchenware					Other tools						Other domestic items								
Locus 1		Nails	Padlock	Keys	Lock pad	Door hinges	Sardine keys	Corned beef keys	Fork	Knives	Spoon	Cooking pot handles	Saucepan handles	Screws	Washers	Machete	Hoe blade	Brick hammer	splitting maul	Sewing machine	Scissors	Metal gong	Bedknobs	metal hoops	Metal hooks	Miscellaneous	Total
Unit	Level																										
Unit 2	Level 1	12					2	3							5										1	4	27
	Level 2	22												13													35
	Level 3	24					8	1							2	2											37
	Level 4	2												1													3
Total for Unit 2		**60**					**10**	**4**						**14**	**7**	**2**									**1**	**4**	**102**
Unit 3	Level 1	16													2										1		19
	Level 2	27					3	4																4		3	41
	Level 3	31	1	2										3			2										39
	Level 4	2													3											2	7
Total for Unit 3		**76**	**1**	**2**			**3**	**4**						**3**	**5**		**2**							**4**	**1**	**5**	**106**
Unit 4	Level 1	24												5													29
	Level 2	30					2							3				1									36
	Level 3	26						2																2			30
	Level 4	0																									0
Total for Unit 4		**80**					**2**	**2**						**8**				**1**						**2**			**95**
Unit 5	Level 1	3					3																				6
	Level 2	12				2								4					1					3		3	25
	Level 3	31			1																						31
	Level 4	3												2													5
Total for Unit 5		**49**				**2**	**3**							**6**					**1**					**3**		**3**	**67**
Unit 6	Level 1	5																									5
	Level 2	9					3								3												15
	Level 3	15																					3				18
	Level 4	3																									3
Total for Unit 6		**32**					**3**								**3**								**3**				**41**
Unit 7	Level 1	4																						1			5
	Level 2	9																									9
	Level 3	2																									2
	Level 4	0																									0
Total Unit 7		**15**	**1**	**2**	**1**	**2**																		1			**17**
Locus 1 total		**312**	**1**	**2**	**1**	**2**	**21**	**10**						**31**	**15**	**2**	**2**	**1**	**1**				**3**	**10**	**2**	**12**	**428**
Locus 2																											
Unit 1	Level 1	13																						1		5	19
	Level 3	23					1						2	3	1									7		12	49
	Level 4	16							1	1	1			6	4											11	40
	Level 5	19						2		1				4	3	1				1	1			9		14	55
	Level 6	14					3				2	2	1	7										4		3	36
	Level 7	5												8	2									3		13	31
	Level 8																										
Unit 2	Level 4																					1					1
Locus 2 total		**90**					**4**	**3**	**1**	**2**	**2**	**2**	**3**	**28**	**10**	**1**				**1**	**1**	**1**		**24**		**58**	**231**
Locus 1&2		**402**	**1**	**2**	**1**	**2**	**25**	**13**	**1**	**2**	**2**	**2**	**3**	**59**	**25**	**3**	**2**	**1**	**1**	**1**	**1**	**1**	**3**	**34**	**2**	**70**	**659**

Table 6.29: Metals and their provenience information

6.3.9.1 Nails

Historical archaeologists have considered nails as constituting one important group of material culture that is often used to determine the age of historic sites, particularly sites that are associated with historic buildings and barns constructed with wood as part of the building material. Nails are often deposited around buildings during the construction phase and the deterioration phase, and historical archaeologists and also historical architects and restorers can use nails to help date these past buildings that once were held together by these nails (Orser 2002, p. 376). Nails have gone through different technological designs and changes based on the methods of production and material used. Based on the type of nails that are found, archaeologists would be able to determine whether a particular building has been subjected to additions, alterations, or maintenance measures as well as help to define the extent of these changes (Nelson 1968, p. 203). The various types of nails that are generally found in historic sites are hand-wrought nails, cut nails, and (steel) wire nails.

In most parts of the world, hand-wrought nails were the earliest nails. Generally, hand-wrought nails were made one by one by hand by a blacksmith or a nailor from square iron rods. They were made by heating the iron rod that was being forged; after that, the smith would hammer all four sides of the softened end to form a point. The pointed nail rod was reheated and then cut off. After this, the smith would insert the hot nail into a hole in a nail header or anvil and then hammer it to form the head. The head of hand-wrought nails exhibited different shapes such as *rose head*, *broad butterfly* heads and narrow *L-heads* (Visser 1997, p. 24). Hand-wrought nails were very hard and expensive and in some situations, old or historic buildings were crumbled to salvage them (Maples 1998, p. 113). It stands to reason that the presence of hand-wrought nails may indicate either a very early site, or the presence of a blacksmithing operation or both (Waechter 2007).

Hand-wrought iron nails were replaced by cut-nails as changes in the nail technology were introduced between the 1790s and the early 1800s. This technique involved the use of machines to make nails from iron bars. However, the process of manufacturing cut nails in Britain and North America differed considerably. The most popular British cut nails were Ewbanks produced by a nail machine invented in 1834 by Dos Works in

Newport, Monmouthshire in Wales (How & Lewis 2009, p. 2). These were produced by *stretching rollers* which squeeze the heated nail rod and leave raised ridges to top and bottom edges of the shank. Ewbanks, which were also known, as "starhead", were wrought iron nails which were efficient nails suitable for hardwoods. Apart from being used extensively in Britain, the Ewhbank nails were also exported to other parts of the world such as India, China, Chile, New Zealand, and Australia where they were very efficient in fastening hardwoods.

In North America, bars of iron or steel were cut in a manner that gave the nails uniform shape with rectangular cross-sections, tapered shank, and blunt ends. Some of the machine cut nails still maintained the hand forged heads but soon machines were developed to pound the end to form the head. This type of nails was made until the 1830s when more effective designs of nail making machines were invented.

The next design innovation of nail machinery, after the machine cut nail, was the modern machine cut nails or steel wire nails. The history of modern nail technology probably began in Britain around 1800. Mr. Mushet of Glasgow was credited with the technology of fusion of malleable iron or iron ore to convert them into cast steel of such a quality as to be malleable and capable of welding (Criak & MacFarlane 1844, p. 690). Wire nails really became the dominant nail type during the 1890s and afterwards. Steel wire nails or the common nails known today are characterised by a round shank and a round head. Each wire nail has "gripper" marks on the shank just below the head. These are tiny parallel indentations, which show exactly where the gripper die gripped the piece of wire while the machine stamped on its head to form the head. The pointed ends of wire nails are generally sharp and made up of four sides created by cutter die.

In the past and even up to today, nails have been produced and sold according to sizes, and archaeologists have accordingly recovered different types of nail and sizes from sites as they were used to fasten different components of buildings and other structures. A total of 377 nails were recovered from the excavations. These were roofing nails (23), concrete nails (25) and other wire nails numbering 329 (Table 6.29). The entire nail assemblage recovered from Frederikssted was wire nails with varied characteristics such as attachment of washers and screw threads. Some are also characterised by screw slots, comprising both single slot and crossheads. Nails with square tips have also been

identified; however, those with round shanks and pointed tips form the majority of the Frederikssted nails.

Figure 6.67: Machine cut iron nails

Some of the nails appear to be late nineteenth or twentieth century, possibly suggesting an even later occupation. Note that the Daccubie excavations (DeCorse 1993) included somewhat distinctive, and possibly locally produced hand wrought nails. However, this type of locally made hand wrought nails was absent among the nail assemblage at Frederikssted.

6.3.9.2 Screws and Washers

According to Gillespie (2008, p. 4), screws were made by hand in the prehistoric times, but machine-made screws and screws with tapering points and machine-cut slots in the head were made at the beginning of the nineteenth century. Screws have an advantage over ordinary nails because of their ability to resist longitudinal pressure. Fifty-two screws were retrieved from the Frederikssted excavation; thirty-one were from Locus 1 while twenty-one were also recovered from Locus 2. Some of the screws were excavated with washers attached to them while others had no washers. The washers that were excavated were twenty-five in number, fifteen from Locus 1 and ten from Locus 2. The washers, which are always attached to screws, are able to distribute pressure of the screw evenly over the surface of the material it fastens so that the surface is protected from damaging. The washer also provides a smooth surface in circumstances where the material being fastened to has uneven surface. This reduces the chance of the screw being loosened because of irregular contacts as a result of uneven surface. For these reasons, some of the ordinary nails that were excavated at Frederikssted had washers attached to them in order to make them more efficient.

Figure 6.68: Machine cut iron nails and screws with washers

6.3.9.3 Padlock and Keys

Padlocks had been in existence since the prehistoric times; during the Roman Era (500 BC-300 AD), ancient Egyptian and Greek cultures used padlocks to secure their business ware against thieves. The general features of padlocks comprise the body, shackle, and the locking mechanism, which is always encased in the body. The shackle is identified by its "U" shaped loop of metal that surrounds the material being secured by the padlock. A single padlock among the metal assemblage recovered from Locus 1 has been identified as a *cast heart iron* padlock, which was developed in the nineteenth century. *The cast heart* is a nineteenth century version of Scandinavian style locks which were originally invented by Christopher Polhem, a Swedish inventor in the early eighteenth century (Pulford 2007, p. 224). *Cast heart* derives its name from its shape which looks like the Valentine's Day heart (not the actual anatomy of the heart). The *cast heart* padlock was cast in different materials such as bronze, brass, and iron which resulted in different forms of hardness and quality. The *cast heart* is also characterised by a drop which was designed to cover the keyway so as to keep dirt and insects from entering the padlock. The *Cast heart* padlock became the most preferred padlock for industrial businesses as well as railroads mainly because of the drop mechanism which protected the lock from moisture and dust. It also functioned well in both tropical hot climate and temperate icy environments (http://united-locksmith.net/blog/the-history-of-padlocks, 10/12/16).

Two iron keys that were found in association with the *cast heart iron* padlock, however, have varied features. They have different bows but similar blades, and one slightly longer than the other. The varied features of the two keys may suggest they belong to two different padlocks.

Figure 6.69: Cast-heart Padlock (A) and keys (B)

6.3.9.4 Door Hinges

A hinge is a metallic object that swivels and allows a door, window, or gate to swing back and forth or up and down to facilitate opening and closing. Hinges have been classified based on their type and size. Some of the common examples of hinges are strap hinges, butt hinges, T hinges, screw-hook hinges, and hasp hinges. Generally, hinges consist of two segments held together by a pin. The two segments are always firmly nailed to a static object and the moving/swinging object. The pin is inserted between the two parts so as to enable back and forth movement. The two hinges recovered from Frederikssted excavations have been identified as *strap hinges.* Strap hinges derive their name from their long straplike appearance as they are much longer horizontally than they are high. Strap hinges are used in circumstances where the hinges must reach across a long surface in order to provide reinforcement and additional support to the wooden structure of the door to which they are fixed. Strap hinges are also used against excessive weight or pressure exerted by the door. This allows weight to be distributed amply over a greater surface area of the frame (Herren 2014, p. 91; Freudenberger 1997, p. 60).

Functional strap hinges were often transformed into decorative features, especially when they were used on heavy doors. In this way, the strap hinges with extra iron scrolls were branched with an arm that extends vertically along the door's stile at right angles to the main strap which goes horizontally (Garvin 2001, p. 81). Strap hinges were mostly made by hand by local blacksmiths as they could be forged at any preferred length for doors of different sizes and weights. Blacksmiths continued to hand-forge strap hinges to be used on large barn and warehouse doors or for heavy fireproof window shutters until the

twentieth century when they were gradually replaced by the machine made steel strap hinges which are still in use today for the same purpose (Garvin 2001, p. 81).

The earliest strap hinges are known to been manufactured in England but with unknown date. For example, *British Archaeological Association* (1873, p. 194) has published reports of strap hinges among Roman artefacts that were excavated at Queen Victoria Street. Moreover, one of the earliest known English patents for strap hinges is known to have been registered in 1775; however, that does not necessarily represent the earliest date of manufacture of the strap hinges (South 2002, p. 120). Medieval and early modern strap hinges were replaced by those that had their heads decorated with lozenge, heart or spearhead shaped decorations (Steane & Ayres 2013, p. 391).

The two strap hinges obtained from Frederikssted excavations were tough hand-forged iron with each having a single knuckle. Their surfaces are corroded but about four nail/screw holes can still be observed on them. Their heads are characterised by single dummy arrow head. This type of strap hinges which were retrieved from Unit 1 Level 5 of Locus 2 are believed to have been manufactured in Britain at least during the eighteenth century. This type was probably the appropriate hinge type for the Frederikssted plantation doors, gates or shutters which were used to secure rooms stocked with farm produce and other trade goods. One lock plate was also found in association with the two strap hinges. Locks were normally attached to the lock plate which was in turn attached to the door for the purpose of locking the door.

A B

Figure 6.70: Strap hinge (A) and strap hinge and lock plate (B)

6.3.9.5 Brick Hammer

The brick hammer is also known as Stoneman's hammer and generally has a sharp, square and flat face which is shaped like a chisel blade. The other end is square and flat and is used as a hammer. The brick hammer was designed for the purpose of hammering nails and for splitting blocks or bricks. The sharp chisel-end can be used to chip off edges or small pieces of stone or to cut bricks and concrete. It delivers light blows or sharp blows to give sudden impact on the brick and can either split the brick/block into different parts or remove chips for fine trimming to shape.

Figure 6.71: Brick hammer

The brick hammer retrieved from Frederikssted excavations shows the chisel-like shank, square slot in which a wooden handle was hafted and the hammer end which now has been modified into ovoid shape due to usage. The brick hammer, which was developed in Britain around the mid-eighteenth century, had become an important masonry tool by the end of the eighteenth century. This hafted tool is said to have replaced the small brick axe at the end the eighteenth century. Lynch (2007, p. 274) has maintained that the development of the comparatively high quality mass produced masonry cutting tools with steel blades like the brick hammer facilitated masonry work as the brick hammer did not require regular sharpening and it was capable of cutting some of the hardest bricks and stones.

6.3.9.6 Axe (Splitting Maul)

An axe is generally a rectangular metallic tool with eye/hole formed at the centre into which a wooden handle is fitted. In most cases, a wedge is inserted into the head of the handle to keep the axe firm on the handle. The axe was traditionally made of iron from the prehistoric times to the eighteenth century, but today axes are completely made of

steel due to mass production (Kauffman: 1994, p. 143). The axe is principally used for felling trees, chopping and splitting wood. During the period before industrialisation, axes were hand forged in a number of small forges with the axe-smith determining its structure and specific function. Axes were mainly used for small-scale farming and domestic tasks until the nineteenth century when the Industrial Revolution created large-scale demand for axes. www.gransforsbruk.com/en/axe-knowledge/the-history-of-the-axe, 17/12/16.

Figure 6.72: Splitting maul excavated from Frederikssted plantation site (A)

The type of axe recovered from Frederikssted excavations has been identified as splitting maul**,** also known as sledge axe. The splitting maul is characterised by a long, straight handle and heavy wedge-shaped head designed to split chunks of logs along the log grain. The splitting maul also has a sharp/axe face at one end and a blunt butt at the other end and it is able to deliver a more powerful strike without getting stuck in the wood (Grooms 2006, p. 100; McDougall 2016). This splitting maul may have been used to split firewood for domestic purposes or it was used to process lumber at the sawmill which was attached to the Frederikssted plantation described by Jeppesen in 1966 (discussed in chapter 3).

6.3.9.7 Farm Tools

The farm implements recovered comprised two fragments of machete blades, one complete machete blade and two fragments of hoe blade. The two machete pieces and the two hoe blade fragments were retrieved from Locus 1, and they were part of the implements used to clear the bush to make way for farming and also to clear weeds that grew among crops. The whole machete metal blade recovered from Unit 1, Level 5 of Locus 2, is corroded and with a curved blade.

Figure 6.73: Curved machete blade

6.3.9.8 Barrel Hoops

The metal hoops have been identified as bands that were used to fasten wooden barrels/ casks that were used to transport both liquid and non-liquid items from Europe to Dodowa. The cask is a tapered or cylindrical wooden container, made of curved wooden staves, sealed at both ends with wooden plugs and wrapped in protective hoops of wood (and later iron), that was/is used to store and transport alcoholic products, especially wine and whisky. There is still controversy over the origin of the cask, probably due to the fact that wooden artefacts barely survive well in the archaeological record. However, the beginnings and the use of the metal hoops have been attributed to the Celtic cultures of central and Western Europe as they were skilled in metallurgy and woodcraft. According to Forbes (1955, p. 119), manufacturing of wooden barrels and casks dates back to Late Bronze Age inhabitants of Switzerland and it gained much currency during the advent of iron tools by the La Tené Age during the 1st century BCE. Up to today, the metal hoops have been used to strengthen casks to increase the safety and durability of both the cask and the contents. The barrel hoops are manufactured in such a way that they are flared to fit the curvature of the sides of the barrel before they are run through steel rollers which curves and flares them at the same time (Work 2014, pp. 147-148). The barrel hoops were recovered from Locus 1 and Locus 2. In all, 34 of the hoops were recovered from both loci. Ten pieces between 30 and 40cm in length were recovered from Unit 2 Level 1 of Locus 2 while 24 were retrieved Locus 2, mostly from different levels of Unit. However, a seemingly complete one of about 70cm in diameter which was partially buried in the ground was retrieved from the surface at Locus 2. Though barrel hoops were manufactured at an earlier date, their appearance at Frederikssted is likely associated arrival with the Danish plantation owners beginging from the later part of the eighteenth century.

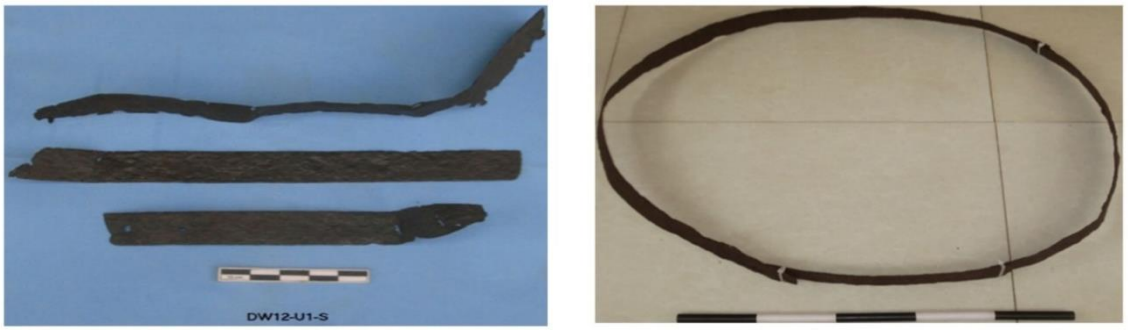

Figure 6.74: Pieces of barrel hoops between 30cm-40cm(A) and a complete barrel hoop of about 70cm in diameter (B)

6.3.9.9 Metal Hooks

The two metal hooks which were both recovered from Locus 1 seem to have performed different functions based on their size. *A*, which was retrieved from Unit 2 Level 2 of Locus1, is comparatively bigger, heavier and more open in the mouth and throat. A notch observed close to the bill may have been used to facilitate mousing which involves closing the open section of the hook to keep slings, straps, and other attachments from slipping off the hook. The hook might have been moused with a rope or wire to make wraps around both sides of the hook. This type of hook is part of a hanging scale used to weigh trade goods that were to be shipped to Europe.

Figure 6.75: A hanging scale hook (A) and probably curtain wire hook or hook for hanging other items

Hook *B* was also excavated from Unit 2, Level 1 of Locus 1 but is slimmer and a bit longer with threaded shank. It is more closed at the mouth and the throat areas. This hook was probably used to hang lighter and delicate items such as lanterns. One other probable function is that it might function as a curtain wire hook used for hanging curtains.

6.3.9.10 Metal Gong

The metal gong is a two-tier metallic object; it was uncovered in Unit 2 of Locus 2 at depth of 40cm deep. It was, however, too fragile to be picked up due to considerable corrosion. The gong made by local blacksmiths (likely in the 19th century) produces sonorous sound when struck with wooden or metal rod.

A B

Figure 6.76: Corroded metal gong in the excavation (A) and two-tier metal gong (B): http://www.thebookbeat.com

In Ghana, the gong has variously been used as musical instrument, object of communication and ritual object in the indigenous traditional religion. Its presence at the Frederikssted plantation site could be attributed to the presence of indigenous people who lived at the site, probably after the plantation collapsed.

6.3.9.11 Sewing Related Metals

Two metal items have been identified as related to sewing; they comprise a sewing machine part and one blade of iron scissors.

*Sewing machine**:*** The part of the sewing machine recovered has been identified as a *bed shaft* located at the base of the sewing machine. The history of the sewing machine is believed to have begun in London in 1755 when a German immigrant Charles Weisenthal invented the first needle to be used for mechanical sewing. The component illustrated is from a hand-operated *Singer* sewing machine. The *Singer* sewing machine was invented and patented in America by Isaac Merritt Singer in 1851 (Bishop et al. 1864, p. 606). Singer machines became popular and efficient sewing machines in Ghana during the nineteenth and the twentieth centuries, and Frederikssted inhabitants might have used it for either domestic/private or commercial sewing.

Figure 6.77: Singer sewing machine part: possibly bed shaft

Scissors: Since the sewing machine is always used in conjunction with scissors, it is no surprise that a piece of scissors blade was found in the same context with the sewing machine. The sharp edges are used for cutting cloth, paper, and a host of materials. Prior to the 1830s all scissors made in England were hand-forged. During this period Sheffield manufactures dominated the scissors market.

Figure 6.78: Blade of scissors

For example, Joseph Rodgers and Sons is reported to have produced 7200 pairs of scissors per week during the 1860s as the Sheffield manufactures had perfected making of highly prized, expensive hand-forged steel scissors worked by skilled artisans. However, from the 1880s machine made scissors began and cheaper steel scissors made by machine were readily available even in France, Germany and the United States (Ledbetter 2012, p. 99). The piece of the scissors blade recovered from Frederikssted is of iron with a long pointed blade with rough surface, possibly hand forged. It was likely used together with the sewing machine for cutting and trimming or for barbering.

6.3.9.12 Bedknobs

Other domestic items also recovered have been described as bedknobs. These hollow metal objects are oval in shape with short necks. There were recovered from Unit 1 of Locus 1 at 10cm deep. They have been observed as decorating materials used mainly for aesthetic functions during the nineteenth and the twentieth centuries. They were mostly attached to uprights of the bed frame as decorations, probably an indication of ostentation.

Figure 6.79: Beadknobs

6.3.9.13 Harmonica

The harmonica is said to have been invented in Berlin in 1821 by then sixteen-year-old Christian Friedrich Ludwig Buschmann. Even though Buschmann secured a patent for the first harmonica in 1822, its origins date further back in China and Vienna where prototypes had been made since the mediaeval times (Manus & Manus 1996:3). Buschmann began by putting together a selection of single reeds to make a chromatic free reed instrument (Major 2005, p. 4). This resulted in the production of 15 pitch pipes which together formed a square instrument approximately four inches on each side (Habif 1985, p. 2).

Two corroded pieces of metals with similar features have been identified as reed plates of an harmonica or mouth organ. The harmonica is a free reed aerophpone or musical instrument that produces its sound or tone when air passes through and vibrates the reeds that have been set into a housing frame. The reeds which are made of brass, aluminium, steel, and sometimes plastic plates are the functional components of the harmonica (Major 2005, p. 4; Morgan 2005, p. 5). Musical sound is produced by blowing air into the reeds or drawing air from them. For this reason, the reeds are always made up of a *draw reed plate* and a *blow reed plate*. The two steel reed plates excavated from Frederikssted most likely belongs to the d*raw* and *blow* units but their similar appearance makes it difficult to determine which is which.

Figure 6.80: Steel reeds of harmonica

6.3.9.14 Corned Beef and Sardine Keys

Other metal artefacts related to foodways recovered from Frederikssted main house (Locus 1) and Locus 2 have been identified as key-winds that were used to open canned fish and corned beef. The sardine keys that were recovered numbered 21, while the corned beef keys were 10 in number. These types of keys were used to open cans by rolling or tearing away a metal strip from the top or side of the can. The use of these cans and the associated keys began in the nineteenth century around 1866 and continues to the present (Waechter 2007). They were/are used to open some canned meats and fish, particularly corned beef and sardines.

Figure 6.81: Sardine can keys

However, key-wind opened tapered tins that had their scored strips removed with a key appeared in 1895 (Rock 1984, p. 101; Maples 1998, p. 113).

Figure 6.82: Corned beef keys

The flat oblong cans used for packing seafood were developed at the beginning of the commercial canning industry around the 1880s (Fontana et al 1962, p. 72). The earliest cans were made in three pieces, before they were soldered. The flat, rectangular, "open-top" double-seamed sardine cans were also introduced and were in regular use before 1880 (Fontana et al 1962, p. 72; Ritchie & Bedford 1985, p. 100).

6.3.9.15 Kitchenware

Cutlery and other knives: Items in this category of metal items were all excavated from Unit 1 of Locus 2; they include one fork, two different knives, two fragments of table spoon, two different handles of iron cooking stove and three aluminium saucepan handles. The tines of the fork (A) had broken off probably due to corrosion, leaving only the handle in the archaeological record.

Figure 6.83: A: Fork B: Knife with horn core handle, C: Folding knife

One of the knives recovered from Frederikssted (B) has a handle made of horn core; it shows three corroded spots denoting the points where three rivets were inserted to fasten the metallic tang and the horn core together. Though a major part of the blade is missing

due to extensive corrosion, the bolster area and the entire tang can still be seen. The other knife (C), which is highly corroded, has been identified as a folded knife. One section of the handle and a short fragile blade remain.

Coal pot and saucepan handles: Other artefacts related to the kitchenware materials are iron cooking pots. Even though fragments of the main body of the iron cooking pots were not recovered, they were identified by the presence of two different handles (Figure 6.83). *A* and *B* are believed to be part of iron cooking pots or coal pots. The iron coal pot was probably made in the twentieth century by local artisans from scrap sheet metal. The coal pot usually has a square or round bowl at the top in which charcoals are placed. It is also characterised by firm or dangling handles of varied shapes and sizes that are placed on two opposite sides of the bowl. It has a hole that goes down to the bottom compartment which forms the base. The base area is open on one side to allow air to flow through the burning charcoal on which the cooking pot is placed.

The use of a coal pot has a great antiquity in Ghana as clay coal pots and ceramic braziers have been used for cooking since prehistoric times (Kelly 2004, p. 235). However, the ceramic coal pot has largely been replaced by iron and aluminium types. The other handles (C), which are also likely of twentieth century origin, are aluminium bowl or saucepan handles. The bowls/saucepans were, however, not found from the excavations.

Figure 6.84: handles of cooking utensils

A: Oval/rectangular handle of iron cooking pot
B: Circular handle of iron cooking pot
C: Handles of aluminium saucepans/bowls

6.3.9.16 Miscellany and Unidentified

Other Miscellaneous metallic objects include burnt aluminium vessels, metallic pipe, and other unidentified can fragments.

Conclusion

The European artefacts recovered from Frederikssted constitute one category of the versatile material culture at the site. Different inhabitants who occupied Frederikssted at different times used these imported artefacts for industrial/commercial, farming, building construction, culinary and other domestic utilitarian purposes.

Chapter 7

Interpretation

7.1 Introduction

The Danish plantation system which from the onset was couched in economic terms was meant to minimize and/or delay the negative economic effects associated with the abolishing of the trans-Atlantic slave trade. However, it is astounding to note that the whole idea of the Danish plantation system was embedded in a double standard. It can be observed that at the same time that the Danish crown was legislating against the Atlantic slave trade, the Danish government was exploring opportunities in the territories around its establishments on the Guinea coast for the cultivation of profitable tropical export commodities through the use of slave labour. As the Danes pioneered the abolition of the trans-Atlantic slave trade in 1803 it was to be expected that Denmark was going to halt slavery and all its forms. To the Danes, plantation slavery/agriculture therefore became the preferred alternative to Atlantic slave trade in the nineteenth century. It can be established from the artefact analyses that most of the Frederikssted materials are dated to the nineteenth century. The nineteenth century European material culture at Frederikssted such as ceramics, glassware, beads smoking pipes, and metal objects have been very significant, representing in Africa the impact of European artistic/ceramic traditions, international trade, industrial development, elite expenditure, ceremonial traditions, manufacturing technology, consumption patterns, and cultural contact (Finlay 2010, p. 6). These represent the spread of European culture in West Africa. The study of such material culture has been decribed by Schuyler (1978, p.28) as "Historic Sites Archaeology".

The Americanist perspectives of historical archaeology seeks to emphasize that historical archaeology studies the cultural remains of literate societies that were capable of recording their own histories and that it encompasses the study of the material manifestation of the expansion of European culture into the non-European world starting in the fifteenth century and ending with industrialization or the present depending on local conditions (Schuyler 1978, p. 28). The Africanist viewpoint of the sub-discipline on the other hand seeks to define historical archaeology as "archaeology undertaken in periods

or for areas in which the principal source of contextual information is provided by documentary evidence". This includes studies where archaeological data are complemented by documentary records and oral traditions (Posnansky and DeCorse 1986, p. 2, Schmidt 1978, 1983). The amalgam of both Americanist and Africanist perspectives of historical archaeology has created the opportunity to study not only prominent European persons like kings and queens and the rich and the famous, but also the common indigenous folk of Dodowa and anonymous local people who were also part of those who made the history in Dodowa.

Artefact evidence from Frederikssted in relation to the local people of Dodowa suggests improved conditions for at least some local people after the plantation. The use of imported elite goods by the post-plantation local occupants might also suggest status differences in the local population. Local elites at Frederikssted acquired wealth through continued ties to the international market and the rest of the local population. The Frederikssted plantation site provides an important view of the post-abolition period, a period of dramatic change in coastal Ghana. Modes of production, trade/exchange, and lifeways were transformed. This provides unique insight into the cultural intersections/contact that ensued during and after the period of the plantation, this laid the foundation for modern day Dodowa.

The African element in Dodowa historical/plantation archaeology can be used to illustrate the varying nature of the European contacts in West Africa; especially, we will be able to better understand the technological, social, and cultural changes within the indigenous African societies during the period of African-European interactions.

The study of Danish plantation economy in Ghana is very significant. The European expansionist idea which culminated in different contact situations included trade which were most cases spearheaded by European multinational corporations. Frederikssted material inventory such as glass materials, barrel hoops, European ceramics, beads, and cowry shells were most likely trade items. Oral accounts from the indigenous people of Lower Dodowa reveal the presence of English and Swiss multinational companies such as United African Company (UAC, British) and Union Trading Company (UTC, Swiss). Most of the trade items recovered from Frederikssted excavations may have been central in the trading activities of these European multinational companies. The integration of the Frederikssted archaeological data and the oral accounts from Lower Dodowa create

the opportunity for us to understand a variety of themes, such as ethnicity, economic activities, and status differences within the indigenous society that became part of the Danish plantation system in Dodowa.

It is unquestionable that the European political economy which took different forms had pervasive effects on West African cultures over the past five hundred years. As the first Europeans to settle in Dodowa, the Danish encounter marked the beginning of incorporation of the indigenous town into the global economic system. One of the issues that steadily grew out of the Danish plantation economy in Ghana, particularly Dodowa, is the colonial legacy of merchandise in Lower Dodowa, and this gives us the opportunity to know how we might examine and understand colonial legacies resulting from these contacts.

Dodowa therefore played a crucial role in the global economies, maintaining compelling connections to the outside world in the eighteenth century to the twentieth century. This is because the evidence of slates and slate pencils (probably for record keeping) reflects the fact that there was a growing network of literate African and Euro-African elites who acted as brokers between the Europeans and the indigenous communities, which enhanced trading activities.

The Frederikssted archaeological data provide a clear indication that the Frederikssted main house was occupied in three phases. First, it was the residence of the Danish plantation owners (plantation phase) from the late eighteenth century up to the early part of the nineteenth century. Second, the archaeological materials also show that, the Frederikssted plantation site was reoccupied probably from the middle part of the nineteenth century by a wealthy local family. Third, architectural remains at Unit 1 Locus 2 also shows twentieth century occupation. The material pattern during the post-plantation period shows high economic status of the occupants who had been acculturated to use various types of European materials to define their status. They were also most likely part of the elite local merchants, majority of whom resided in Lower Dodowa during the nineteenth century. Comparison of the material culture associated with the three phases gives an opportunity to understand both the plantation context and the post-plantation context of Frederikssted.

The artefact assemblage from Frederikssted excavations indicates internal social heterogeneity among the occupants of the plantation landscape. Clearly, there are artefacts associated with African ways of life and European ways of life. In view of the different dates displayed by the Frederikssted artefacts, it can be concluded that the existence and the collapse of Frederikssted plantation is not consistent with the mid-nineteenth century ceramics and other materials with similar date.

7.2 Site Formation Pattern of Unit 1 at Locus 2

The site formation pattern of Unit 1, Locus 2 (Figure 7.1) suggests two occupational phases in this area. The first phase has been identified as the nineteenth century refuse pit (4, cut). The refuse (5, fill) is believed to have been associated with nineteenth century local occupants who reoccupied the main house after the plantation collapsed. The second phase is associated with a probable twentieth century architecture with its stone foundation (3) laid on top of the nineteenth century refuse pit. Apart from the stone foundation, this later phase architecture is also characterised by a white plastered floor (2). A house mound (1) which resulted from the collapse of the building was the most visible feature at Locus 2. Three excavated units, comprising Unit 1, Unit 2 and Unit 4 were all sited on the same stretch of house mound. Numbers 6 and 7 (Figure 7.1) represent the opposite sides of the refuse pit, while 8 represents sterile level.

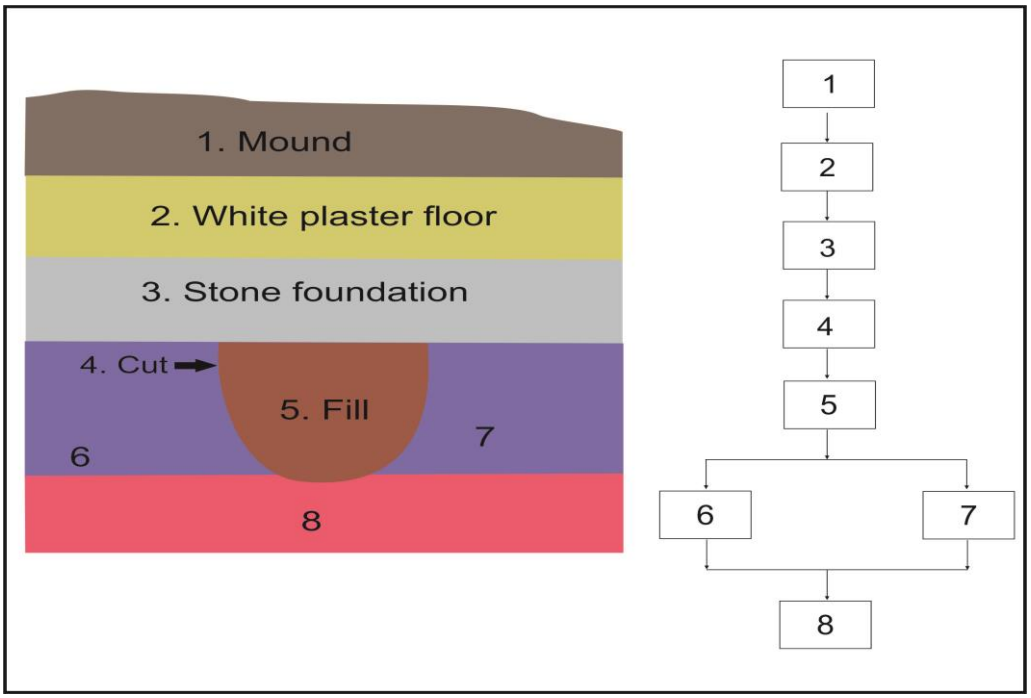

Figure 7.1: Harris matrix for the depositional pattern at Unit 1 Locus 2

7.3 Occupational Phases at Frederikssted Plantation Site

Some Dodowa elite indigenes considered the then abandoned Frederikssted plantation as a convenient accommodation unit and therefore moved in to occupy the site. Evidence of education and entertainment artefacts, the kitchenware materials, foreign beads, and evidence of sewing throw more light on the elite lifestyle of the occupants during the post-plantation period. Since these nineteenth century and twentieth century artefacts were found in the same archaeological context as the local materials, it seems likely that elite indigenous people reoccupied Frederikssted during the post-plantation period. Frederikssted plantation is said to have ceased operation in 1802 (Jeppesen 1966; Norregard 1966); nevertheless, a substantial number of the imported ceramics date after the 1830s. This suggests that after 1802 the plantation site was reoccupied, most likely by local elite due to the presence of local material and European materials in the same archaeological context.

The discussion that follows shows the occupational phases of the Frederikssted plantation landscape. This has been done through the assessment of the spatial distribution of the Frederikssted artefacts that have been dated. The location of Locus 1 and Locus 2 and their associated material culture has significant implications for the interpretation and understanding of the occupational phases of the Frederikssted plantation landscape. Three occupational phases have been identified; they are the eighteenth century plantation phase, the nineteenth century post-plantation phase and the twentieth century occupation.

Plantation phase

The plantation phase is represented by materials with contemporaneous dates with the Frederikssted plantation, on Table 7.1 (these were all found at Locus 1). During the period of the plantation, the archaeological evidence is limited to the main house at Locus 1. Locus 1, which was occupied from the inception of the plantation from 1794, was the residence of the planters or the plantation managers, which was also the centre of authority and supervision on the plantation. Archaeological data analysed on Table 7.1 indicate that the earliest phase of the plantation was at Locus 1. Therefore, the period between 1794 and 1802 was the most active period for the operation of Frederikssted plantation.

The analysis of the artefacts from the earlier/plantation phase of Locus 1 provides details of material use, spatial and chronological factors that affected the use of materials at the site as well as the materials associated with the occupational phases through time. These factors can hardly be determined solely by scanty written documents about the plantation. Nonetheless, documentary sources provide information that cannot be obtained from the excavations, especially issues concerning the plantation owners and when the plantation was established.

It is therefore stimulating that both the historical documents and the archaeological data on Table 7.1 show eighteenth century or earlier material culture, and most significant, one Danish teacup of Royal Copenhagen porcelain (Figure 6.23), corroborating the historical accounts about the Danish ownership of Frederikssted plantation. It must be remembered that of the imported ceramic wares, only the Royal Copenhagen porcelain has been identified as originating from Denmark.

Other material objects which date to the plantation phase are a buckle, barrel hoops, plain porcelain, windmill printed ceramics, decanters, tumblers, wine glasses, a ground shank stopper, and a brick hammer. These materials were most likely part of the material culture of the Danish planters during the plantation phase period. Their presence suggests a way of life characterised by affluence and prestige, and probably had effects on the lifestyle of the later African occupants at the plantation landscape.

Material	**Date**	**Unit**	**Level**	**Number**	**MNI/MNV**
Buckle	19thC	4	4	1	1
Barrel hoops	18thC	3	2	4	4
	"	4	3	2	2
	"	5	2	3	3
	"	7	1	1	1
R.Copenhegan por.	1770	2	4	3	1
Plain porcelain	18th C	2	2	10	8
Windmill Printed	18th C	3	4	3	2
Decanters	18th C	2	3	7	1
Tumblers	17th C	4	4	7	1
Wine glass	17th C	2	4	8	3
Ground shank stop.	1745	2	3	1	1
Brick hammer	18th C	4	2	1	1
Total				**51**	**29**

Table 7.1: Locus 1 materials dating to the plantation phase

Post-plantation phase (nineteenth century)

The distribution of items dating to the early to mid-nineteenth century suggests that in the post-plantation phase, there were changes in the physical layout and activities within the plantation landscape. These changes also correlate with shifts in socio-economic patterns on the plantation landscape after the collapse of the Frederikssted plantation in 1802.

Locus 1					
Material	**Date**	**Unit**	**Level**	**Number**	**MNI/MNV**
Tuscon Rose	1814	3	4	7	2
Stoneware	1820	2	4	5	2
Bouquet printed	1826	2	4	2	1
Clobbering	1840s	4	3	2	2
Bortanical tr.print	1810	3	3	2	1
Other tr. Printed	1830s	3	3	5	3
Sauce bottles/clos.	1850	2	3	31	11
Body cream	19th C	3	3	17	10
Poison and medicine	1800s	2	2	5	4
Prosser beads	1830s	6	3	8	8
Plastic button	20th C	3	2	1	1
Nails	1804	2	1	12	12
	"		2	22	22
	"		3	24	24
	"		4	2	2
	"	3	1	16	16
	"		2	27	27
	"		3	31	31
	"		4	2	2
	"	4	1	24	24
	"		2	30	30
	"		3	26	26
	"	5	1	3	3
	"		2	12	12
	"		3	31	31
	"		4	3	3
	"	6	1	5	5
	"		2	9	9
	"		3	15	15
	"		4	3	3
	"	7	1	4	4
	"		2	9	9
	"		3	2	2
Padlock	19th C	3	3	1	1
Padlock Keys	19th C	3	3	2	2
Corned beef keys	1866	2	1	3	3
	"		3	1	1
	"	3	2	4	4
	"	4	3	2	2
Sardine keys	1866	2	1	2	2
	"		3	8	8
	"	3	2	3	3
	"	4	2	2	2
	"	5	1	3	3
	"	6	2	3	3
Screws	19th C	2	2	13	13
	"		4	1	1
	"	3	3	3	3
	"	4	1	5	5
	"		2	3	3
	"	5	2	4	4
	"		4	2	2
Washers	19th C	2	1	5	5
	"		3	2	2
	"	3	1	2	2
	"		4	3	3
	"	6	2	3	3
Machete	19th C	2	3	2	2
Hoe blade	19th C	3	3	2	2
Splitting maul	19th C	5	2	1	1
Metal balls	20th C	6	3	3	3
Metal hooks	19th C	2	2	1	1
	"	3	1	1	1
Total				**487**	**447**

Table 7.2: Locus 1 artefacts postdating the plantation phase

Some Dodowa indigenes or merchants reoccupied the plantation main house after 1802 and extended the physical layout of the site to include Locus 2 where a refuse pit was created, and excavations yielded a high proportion of mid-nineteenth century items and activities. Table 7.2 shows materials at Locus 1, which postdate the plantation phase (1794-1802) and correlate with most of the nineteenth and twentieth centuries' material obtained at Locus 2.

Although Table 7.3 shows artefacts having contemporaneous dates with the plantation phase materials, they are believed to have been acquired and used during the post-plantation era from the nineteenth century to the twentieth century. The presence of these seemingly earlier types of materials such as creamware, pearlware, true porcelain, and beads may have been as a result of recurrent use. They may have also been reused in the nineteenth century in a secondary context. It is also possible that these earlier materials were once located in Locus 1, but the nineteenth century occupants swept them off or removed them and dumped them in the refuse pit at Locus 2.

Material	**Date**	**Unit**	**Level**	**Number**	**MNI/MNV**
Whieldonware	1740s-20thC	1	5	60	1
Cut sponge stamp	1780s-20thC	1	2	6	1
Annular banded	1780s-20thC	1	1	10	3
Malkin Belle	17thC-20thC	1	5	2	1
Mocha	1790s-20thC	1	5	5	1
Willow printed	1795-20thC	1	5	5	1
	"	1	6	6	1
Plain porcelain	7thC-20thC	1	4	79	20
	"		5	2	1
Pirced edge porc.	10thC-20thC	1	5	15	1
Mirror	18thC-20thC	1	5	34	1
Cowry shells	16thC- 20thC	1	2	3	3
	"	1	3	4	4
	"	1	4	2	2
	"	1	5	5	5
	"	1	6	6	6
	"	1	7	3	3
Drawn beads	15thC-20thC	1	**3**	**2**	**2**
			4	7	7
			5	18	18
			6	16	16
			7	12	12
			8	4	4
Carnelian bead	500BC-20th	1	6	1	1
Venetian w. bead	1600s-20thC	1	6	1	1
Total				**308**	**116**

Table 7.3: Locus 2 material dating to the plantation phase

The nineteenth century post-plantation period had a pattern of artefact use marked by a relatively high proportion of the material inventory at the Frederikssted landscape.

Material	Date	Level	Number
Local pottery		4	77
		5	308
		6	145
		7	84
Press moulded cer.	1891-20thC	6	31
Malkin Belle	1891-20thC	5	2
Doll	1837-20thC	5	2
Oriental design	1830s-20thC	4	2
Mocha	1790s-20thC	4	5
Willow	1795-20thC	5	11
Pirced edged porc.	10thC-20thC	5	15
Oriental porcelain	1830-20thC	6	2
Plain porcelain	1837-20thC	5	4
Whieldonware	1740-20thC	5	60
Schnapps/gin	1850-20thC	5	36
Champagne/wine	1820s-20thC	4	55
Bitters	1824-20thC	5	2
Mineral water	1890s	5	4
Syrup bottles	19thC-20thC	5	12
Mirror	18thC-20thC	5	34
Perfume	1820s-20thC	5	6
Prosser beads	1860s	6	3
Monochrome beads	Mid-19thC	4	7
	"	5	4
	"	6	3
	"	7	12
Blue heart bead	19thC	5	1
Local beads	20thC	4	26
	"	5	42
	"	6	38
	"	7	28
	"	8	10
Drawn beads	15thC-19thC	4	7
	"	5	18
	"	6	16
	"	7	12
	"	8	4
Cowry shells	16thC-20thC	4	2
	"	5	5
	"	6	6
	"	7	3
Slates	19thC	4	3
	"	7	2
Slate pencils	'	4	4
	"	5	8
	"	6	2
	"	7	1
	"	8	1
Nails	1840-20thC	4	16
	"	5	19
	"	6	14
	"	7	5
Sardine keys	1866-20thC	6	3
Corned beef keys	1866-20thC	4	1
	"	5	2
Iron stove handles	19thC-20thC	6	2
Saucepan handles	19thC-20thC	6	1
Fork	19thC-20thC	4	1
Knives	19thC-20thC	4	1
	"	5	1
Spoon	19thC	6	2
Singer s. machine	1851-20thC	6	7
Screws	19thC-20thC	4	6
	"	5	4
	"	6	7
	"	7	8
Washers	19thC-20thC	4	4
	"	5	3
	"	7	2
Machete	19thC-20thC	6	1
Scissors	19thC-20thC	6	1
Hoops	1stC BCE1-20thC	4	9
	"	5	4
	"	6	3
Harmonica	1821-20thC	6	2
Total			**1294**

Table 7.4: Materials found in the refuse pit (Unit 1 Locus 2)

Table 7.4 shows an increase in material use at the site after the plantation phase. Even though the distribution of local pottery and local beads is varied, the majority of these materials were found at the refuse pit in Unit 1, Locus 2, in association with nineteenth century European materials.

A total of 821 (out of 917) sherds of local pottery were retrieved from the nineteenth century refuse pit, while 177 (out of 192) local beads were obtained from the same locale. All the bead moulds (61 fragments) recovered from the excavation were also obtained from the refuse pit related to the nineteenth century indigenous occupants. Since most of the materials were retrieved from the refuse pit in Unit 1 of Locus 2, it is understandable that Locus 1, which was used as a living area, was probably swept often, and the debris dumped at Locus 2 refuse pit. Therefore, materials found in the refuse pit are mixed in terms of chronology. The dates of the refuse pit materials comprise pre-eighteenth century to twentieth century dates.

As Lower Dodowa became a major trading centre for both European and local goods in the nineteenth century, it is possible that the post-eighteenth century local occupants cherished and easily had access to both pre-eighteenth century and post-eighteenth century materials. The post-plantation phase materials further gives credence to twentieth century occupation of the plantation site which marked the third occupational phase. The increased proportion of the material inventory at the post-plantation period may suggest relatively more occupants who may have engaged in different economic activities such as farming, trading, bead making, and probably tailoring.

Material	Date	Unit	Level	Number	MNI/MNV
Press moulded cer.	1891	1	6	31	7
Tel. insulators	1885	Surface	N/A	2	2
Malkin Belle	1891	1	5	2	1
Doll	1837	1	5	2	1
Oriental design	1830s	1	4	2	1
Schnapps/gin	1850	1	5	36	4
Champagne/wine	1820s	1	4	55	10
Beer bottle	20th C	1	4	7	7
Bitters	1824	1	5	2	2
Mineral water	1890s	1	5	4	4
Syrup bottles	19th C	1	5	12	3
Perfume	1820s	1	5	6	6
Prosser beads	1860s	1	6	3	3
Monochrome beads	Mid-19thC	1	3	3	1
	"	1	4	7	4
	"	1	5	4	4
	"	1	6	3	2
	"	1	7	12	5
Blue heart bead	19th C	1	5	1	1
Local beads	20th C	1	2	15	15
	"	1	3	33	33
	"	1	4	26	26
	"	1	5	42	42
	"	1	6	38	38
	"	1	7	28	28
	"	1	8	10	10
Slates	19th C	1	4	3	1
	"	1	7	2	1
Slate pencils		1	3	4	4
	"	1	4	4	4
	"	1	5	8	8
	"	1	6	2	2
	"	1	7	1	1
	"	1	8	1	1
Nails	1804	1	1	13	13
	"	1	3	23	23
	"	1	4	16	16
	:	1	5	19	19
	"	1	6	14	14
	"	1	7	5	5
Sardine keys	1866	1	3	1	1
	"	1	6	3	1
Corned beef keys	1866	1	4	1	2
	"	1	5	2	2
Iron stove handles	19th C	1	6	2	2
Saucepan handles	19th C	1	3	2	2
	"	1	6	1	1
Fork	19th C	1	4	1	1
Knives	19th C	1	4	1	1
	"		5	1	1
Spoon	19th C	1	6	2	2
Singer s. machine	1851	1	5	1	1
Screws	19th C	1	3	3	3
	"	1	4	6	6
	"	1	5	4	4
	"	1	6	7	7
	"	1	7	8	8
Washers	19th C	1	3	1	1
	"	1	4	4	4
	"	1	5	3	3
	"	1	7	2	2
Machete	19th C	1	6	1	1
Scissors	19th C	1	6	1	1
Metal gong	19th C	2	4	1	1
Total				**560**	**430**

Table 7.5: Locus 2 material dating after the plantation phase

Phase 3: Probable twentieth century phase

The pattern of site formation at Locus 2 further demonstrates a third phase (also post-plantation) of occupation at Frederikssted plantation site, most probably during the twentieth century. Unit 1 was characterized by a house mound, a white painted floor (4cm deep), and a stone foundation (probably made of remnants of Frederikssted stone blocks) which runs through the entire length and breadth of the unit. It must be re-emphasized that beneath this stone foundation at Level 3 (30cm to 100cm) was the nineteenth century refuse pit where significant amounts of local materials and nineteenth century European materials were found. It can clearly be observed that the house mound, the white floor, and the stone foundation were part of architectural remains that post-dated the refuse pit, and represent another (later) phase of occupation at Frederikssted plantation site. Artefacts found in this twentieth century context numbered 248. They are local pottery (96), local beads (15), cowry shells (3), faunal remains (8), European ceramics (54), metals (68), and European smoking pipes (4). These materials were retrieved from level 1 to level 3 above the refuse pit. It is probable that some of these materials may have emanated from the refuse pit due to disturbances caused by activities of rodents.

Unit	Level	Local pottery	Local beads	Cowry shells	Faunal remains	European ceramics	metals	European s.Pipes	**Total**
Unit 1	Level 1	39			6	10	19		**74**
	Level 2	57	15	3	2	44	49	4	**174**
	Total	**96**	**15**	**3**	**8**	**54**	**68**	**4**	**248**

Table 7.6: Materials associated with the 20thC occupational phase at Locus 2

The rooms of these later architectural remains were varied, and were distinguishable by flooring materials. The floor of the south room was covered with a white paint of a millimetre thick while the subsequent rooms to the north had no surviving flooring material or probably had a beaten earth floor. Evidence of partitions between the rooms has survived in the form of linear gaps between the rooms towards the north. The presence of the stone foundations suggests that the building was exclusively built with mud and probably roofed with a wooden lattice frame and thatch, different from the popular wattle and daub architecture which has no foundation.

7.4 Discussion of the Frederikssted Nineteenth Century Material Culture

The Frederikssted material culture comprises African and European/imported materials. The detailed discussion that follows is based on cultural interpretations of both African and European artefact assemblage vis-à-vis their sociocultural implications.

The integration of the nineteenth century materials (local and European materials) suggests that the local occupants who reoccupied the plantation site built a way of life dictated by the acculturative effects of the European contacts in West Africa beginning from the late fifteenth century. The use of both local and European material culture by the nineteenth century local occupants at Frederikssted plantation site represents culture change propelled by material innovation in Dodowa as a frontier zone.

The European contact in Dodowa in the form of plantation economy, slave trading, and trading in material goods between 1794 and 1850 had acculturative effects on the indigenous cultures of Dodowa. The nineteenth century European artefacts indicate that the local people who became associated with the Danes and other Europeans constituted themselves into an elite class and used European material culture to define their *new* status. However, the conceptualization of the European material culture by the local people has not sought to undermine indigenous cultural processes. In the face of widespread European technological innovation and material culture in West Africa during the nineteenth century, Africans have always maintained their sense of identity through the use of African material and non-material culture. Although the nineteenth century African occupants at Frederikssted used numerous European materials to define their relatively prestigious lifestyle, they still cherished African material culture, which they used both for utilitarian purposes as well as to express their worldview. In some instances, the local residents used some European materials (smoking pipes and beads) and their African counterparts at the same time, and also appropriated some European materials (cowry shells, metal gong and perforated coin) into the African sociocultural belief systems. This suggests an attempt to indigenise the European materials in Africa. It also affirms the view that Africans have certainly not been cultural clones of Europeans because Africans still use many aspects of indigenous material culture, and can also interpret their beliefs, rituals, and worldview in non-European terms (DeCorse 1992, pp. 182-183, 1998, p. 365).

Some of the material culture representing the presence or lifeways of Africans was recovered from both Locus 1 and 2 during the archaeological excavations. These African related materials are local pottery, local clay tobacco pipes, local beads and bead making materials, and some faunal remains (Table 6.3). These items of African related materials were either obtained from nearby in the environment, or from markets, or manufactured on site. The African occupants who made use of these African related material culture had also become acculturated to use nineteenth century European materials. The material manifestations of the acculturative behaviour of the nineteenth century African occupants at Frederikssted is demonstrated in the array of artefacts related to architecture, indigenous worldview, diet, bodily decoration, child rearing, literacy, economics/trade, agriculture, and ornamentation.

Architecture materials

The architecture group of materials are the building remains, nails, padlock and keys, hinges, and the brick hammer. These materials were essential in building and transforming the main plantation house. The physical characteristics of the plantation settlement include the extant ruins of a 40-meter-long building (Figure 5.6) built in sandstone blocks and adjacent house mounds at the immediate north. Most of the time, the plantation buildings have possessed more physical and ideological visibility than other structures associated with the plantation. The plantation buildings were places where the planters exercised their power and authority. The plantations have been described as the planter's "power domain," and the planter class constituted a "power elite" (Orser 1990, p. 115; Mills 1956). The main plantation houses are often the ones that remain for long and often become the first sites to be studied by archaeologists. Moreover, many of these plantation houses continued to be occupied as residences or venerated because of their association with notable events and personalities (Orser 1990, p. 121; Harrington 1952). The local occupants who reoccupied the Frederikssted plantation site in the nineteenth century may have considered the plantation precincts a prestigious place to live and therefore invested in it by using nineteenth century roofing nails to reroof the entire structure.

The nails (Figures 6.67&68) recovered from Frederikssted entirely comprised iron nails, numbering 402. These nails have varied characteristics such as attachment of washers and screw threads. The majority (312) of the nails were found at Locus 1, while 90 were

retrieved from Locus 2. It is obvious that the 90 nails found at Locus 2 emanated from Locus 1 as they were part of the nails that were swept off and dumped in a refuse pit in Locus 2 Unit 1. As the plantation building was built in 1794, it would be expected that hand-wrought nails or cut nails would be recovered from the excavations. The presence of rather machine made iron nails manufactured in the early 1830s clearly shows that the roofing of Frederikssted main building had gone through modification and alteration. The nineteenth century post-plantation African occupants most likely re-roofed the entire Frederikssted house, perhaps due to deterioration in the nineteenth century, at which time inexpensive machine cut iron nails were readily available.

Apart from nails which most likely related to the main building we have no other evidence about the sawmill and the granary which were mentioned by Jepesen in his 1966 survey. Materials related to the sawmill would be interesting to examine. For instance, whether the sawmill used wood processing tools such as bigger axe, hatchet, or pit sawing, would be interesting to note. Wood remnants have not also survived to show tool marks to determine which type of tool was used in sawing the wood. However, more nails are expected at the locations of these facilities, as they are likely to have been made of wood and, of course, nails.

The sawmill is of particular interest because, even though we have no idea how it operated, it is possible it played a pioneering role in pit-sawmilling in Ghana. Pit-sawmills, which were widespread in Ghana in the early to late twentieth century, involved cutting wood boards manually with one sawyer above a pit and the "pitman" below in the pit. The pair used a two-handled ripsaw to cut along a log or timber that was set on a support frame laid across the pit.

With limited fast flowing rivers and streams in the area, a water powered saw mill can be discounted alltogether as a possible method of wood processing in the Dodowa valley. Even though pit-sawing was a laborious method of wood processing, it became the common method of wood processing in Ghana, as some of the pits can still be found in some places. It is not clear if the brick hammer and the axe recovered were part of the tools used in the sawmill. The axe, for instance, could have been used to fell trees to make way for farming and also to split firewood just as is done even today. The brick hammer (Figure 6.71) is likely to have been used to hew stone blocks and chip off stone blocks into shape, which were used in building the plantation house. Perhaps further

archaeological works might yield information about the sawmill and the granary on the Frederikssted plantation landscape in the Dodowa valley.

In Europe, the *Cast heart* padlock (Figure 6.69) is said to have become a useful padlock for industrial businesses as well as railroads during the nineteenth century. This may suggest that the nineteenth century African occupants at Frederikssted plantation site used it to secure essential stock, especially trade goods, or to enhance room security due to their business and relatively affluent lifestyle.

Way of life and worldview

The Frederikssted archaeological data also provide an insight into the worldview of the nineteenth century local occupants who lived on the plantation landscape. Some of the excavated artefacts such as cowry shells, perforated coin, gin/schnapps bottles, and the metal gong (Figures 6.62, 6.29, 6.66B &6.76B) are known to be important ritual paraphernalia in both historical and ethnographic contexts in most traditional Ghanaian societies. Since the cowry shells were found in the context of post-plantation phase materials at Locus 2, they were most likely part of business or religious materials belonging to the African occupants during the post-plantation phase. In situations where cowry shells were used for ornamentation especially in jewellery, on masks and figurines, they were still imbued with magico-ritualistic meanings, such as in divination or in protective amulets or charms.

The coin (Figure 6.66B) is characterised by two perforations; the original perforation (part of the design) is located in the middle while another perforation can be seen at the periphery. Local users who used it in a secondary context likely made the secondary perforation to string the coin, which was used as a neck pendant worn by children as a healing device for different forms of childhood diseases. The local occupants during the nineteenth century may have used alcohol (spirits) for pouring of libation in many ritual situations. The use of these European materials by Africans to express their worldview reflects the significant acculturative effects that European material culture has had on the cognitive system of the local elite who occupied Frederikssted in the nineteenth century post-plantation period as well as current traditional societies in Ghana.

Food-ways

Material culture related to the food-ways of the nineteenth century local occupants of the plantation site comprises both direct and indirect evidence. The direct evidence is in the form of faunal remains, corned beef and sardine keys.

The inhabitants of Frederikssted plantation depended on faunal products from bovids (both domesticated and wild), birds, fresh water/riverine fish, and land snails for food, all of which were excavated at Unit 1 at Locus 2. Bredwa-Mensah (2002, pp. 39, 44, 50) records livestock being raised on most Danish plantations as well as hunting of animals such as deer, antelope, rodents and birds that abounded in the nearby forests of the plantations' vicinity.

Archaeological excavations carried out on plantations sites where slaves lived have often provided evidence about slave diet and health (Fairbanks 1983, p. 24; Gibbs et al 1980; Reitz et al 1985; Reitz 1987; Walker 1985, 1988; Singleton 1995; Orser 1990; Mckee 1999). This attests to archaeologists' ability to provide material details about aspects of plantation life which are hardly present in written historical records. In addition, zoo archaeological analyses elsewhere have revealed a mixed consumption culture of wild and domesticated animals, which is important in analysing slave agency. Slave agency manifests in the efforts of the enslaved people to undertake other activities such as hunting, fishing, raising of livestock, and trading to enhance their material lives in order to supplement and complement the inadequate supplies from their masters.

It is, however, difficult to assign the Frederikssted faunal materials to slaves or Europeans during the plantation phase. All the faunal remains obtained from Frederikssted were excavated from Unit 1 of Locus 2 where post-plantation (nineteenth century) African occupants dumped their household trash. Therefore, the Fredrikssted faunal remains are related to African occupants during the post-plantation phase. This is because the faunal materials comprising domesticated and wild species retrieved from Unit 1 of Locus 2 (Table 6.19) were mixed with other materials of both local and European origins, which have been dated to mid-nineteenth century (post-plantation phase). These nineteenth century occupants utilized both domesticated animals such as cattle, pigs, and goats as well as wild fauna such as rats, moles, grasscutters, wild bovids, birds, snails, and fish, which provided a good source of protein to these post-plantation African occupants.

Other direct evidence of food-ways of the nineteenth century African occupants is related to corned beef and sardine keys (Figures 6.81 & 6.82). Items in this category comprise 25 sardine keys (21 from Locus 1 and 4 from Locus 2) and 13 corned beef keys (10 from Locus 1 and 3 from Locus 2). According to Ritchie and Bedford (1985, p. 100), the popularity of canned fish led to experimentation with different quick-opening devices; and in 1895, E. Norton of Chicago developed a key-method of roll-opening a scored strip on the lid of a sardine can, which is still in use today. Products such as corned beef, sheep meat and rabbit meat have been canned in rectangular shaped tin containers larger at one end than at the other, also using a key to tear away a metal strip at the side of the can so as to separate one end of the body of the can from the other (Ritchie and Bedford 1985, p. 100). Presumably the corned beef type containers were found relatively convenient and easier to pack more into the space, and it became the established standard shape.

As artefacts that came into being during the second half of the nineteenth century and are still in use today, their presence at the Frederikssted plantation area is datable to this period. If the use of cans and their keys appeared during the 1890s, it then suggests that these food cans were used and discarded at the plantation site after the entire Danish era, which ended in 1850. Their usage by local people gives an indication of the local people's changing consumption patterns to include European imported food items, which formed part of local participation in a global consumer culture.

Indirect evidence of food-ways consists of local and European pottery, sauce bottles, mineral water bottles, alcohol bottles, cooking materials, and cutlery. Local pottery at Frederikssted (Table 6.5) was clearly different from European ceramics, which were also common at the Frederikssted site. Since Locus 1 was used as a living space, the African occupants who reoccupied Locus 1 (the main house) in the nineteenth century cleared disused pottery materials into the refuse pit located at locus 2. This made Locus 2 yield a greater proportion of the local pottery materials. Analyses of the rim types revealed two stylistic differences, thus, bowls (136) and jars (54). Bowls were generally used in food preparation. Their frequent handling makes them prone to frequent breakages and discard. The jars were mostly used for storage purposes and as such were most of the time stationary. The paste was brown and red, however, the surfaces were decorated with colours such as black (729), red (78), brown-red-black (40), brown (144), and eroded

(76). Sherds covered with soot (black colour) suggest that they were used as cooking utensils that were frequently placed on fire to cook food.

Vessel forms of the locally manufactured pottery, especially the carinated type (Figure 6.2a to Figure 6.2g), shows Akan influence that can also be seen in other sites in the Accra plains. The carinated bowls are indicative of the heterogeneous nature of the population of the Accra plains resulting from the movement of people including the Akan into the Accra area because of lucrative trade, not only in slaves, but also in commodities such as palm oil and gold (Boachie-Ansah 2007b, p. 537). In response to market demands, the Shai potters (in Dodowa area) made a variety of wares for different communities that thronged the Accra plains area. Based on these observations, the Frederikssted pottery reflects Akan/Akuapem presence on the plantation site. In other words, the African occupants who reoccupied the plantation landscape from the early nineteenth century could possibly be people of Akan origin who used that particular pottery type to reflect their traditions, origin and identity on the plantation landscape.

In terms of decoration, many of the sherds (1001) were undecorated, with some incision (23), applique (9), and grooving (34). The greater majority of the sherds (755) had no surface treatment, with eroded surfaces (38), slightly burnished surfaces (62), burnished surfaces (150), smudged surfaces (47), red slipped treatment (10), slipped and burnished surfacs (2), and micaceous surfaces (3). Many undecorated sherds suggest users who needed anything utilitarian but not objects to be fancied, a pattern that departs from the ethnographic model of distinctive Shai pottery.

Different uses can be assigned to items of pottery based on their sizes and shapes (Bredwa-Mensah 1996, p. 454; Anquandah 1992a, 1992b). Vessels excavated at Frederikssted are mainly domestic utilitarian vessels which include water conveyance and water storage pots, cooking pots, eating bowls, grating vessels and soup preparation bowls. Some of the pots may have been used for storing grains or grain flour and dough, tapping and storing palm wine as well as preparing and boiling plant medicine.

Beginning from the seventeenth century and continuing to the nineteenth century, European imports in ceramic material into West Africa intensified. While the Dutch and the Brandenburg company sold a sizable number of stoneware vessels during the seventeenth century, Liverpool also exported a substantial amount of earthenware to

Africa during the latter part of the eighteenth century (DeCorse 2001, p. 154). The European imported ceramic assemblage at Frederikssted (Table 6.21) is represented by myriads of ceramic product from different European countries such as Britain, Germany and Holland. The collection includes categories such as creamware, pearlware, semiporcelain, porcelain and stoneware. The majority of the ceramics display a variety of decorations ranging from transfer printed in floral designs and oriental patterns as well as hand painted designs.

Locus 1		Ware	Decoration	Date	Functional type										
Unit	Level	Creamware			Cup	Saucer	Plate	Bowl	Vase	Lid	Tel. mat	Doll	Bottle	Total	NMI
Unit 2	Level 3		Greek key	1820-20thC			1							1	1
Unit 3	Level 3		Blue-on-white	1830-20thC			8							8	6
	Level 4		Windmill	16thC-20thC			3							3	2
Unit 4	Level 3		Clobbering	1840-20thC	1					1				2	2
Unit 4	Level 4		Unidentified				2							2	2
Unit 3	Level 4	True Porcelain													
Unit 2	Level 2		Plain	7thC-20thC	4		6							10	4
			Botanicals	1810-20thC			2							2	1
Unit 2	Level 4		R. Copenhegan	1770-20thC	3									3	1
Unit 2	Level 4	Stoneware	Brown bottle	1820-20thC									5	5	2
		Whiteware	Tuscan Rose	1814-20thC			7							7	2
			Bouquet	1820-20thC			2							2	1
		Locus 1 Total			**8**		**31**			**1**			**5**	**45**	**24**
				Locus 2											
Locus 2		Creamware	Annular banded	1780-20thC				10						10	3
Unit 1	Level 1		Plain	1780-20thC			10							10	7
	Level 2		Cut sponge stamp	1780-20thC				6						6	2
	Level 5		Whieldonware	1740-20thC					60					60	1
	Level 5		Floral design	1830-20thC			2							2	2
	Level 6	Pearlware													
			Blue-on-white	1820-20thC			28							28	13
	Level 4		Mocha	1790-20thC	5									5	1
	level 5		Willow	1795-20thC			11							11	1
	Level 6		Floral pattern	1830-20thC			62							62	23
	Level 6	Semi-porcelain													
			Malkin Belle	1891-20thC		2								2	1
	Level 5		Pressed moulded	1891-20thC			31							31	7
	level 6		Plain	1855-20thC							2			2	2
		True Porcelain													
			Plain	7thC-20thC	9		70							79	21
	Level 5		Pierced edge	10thC-20thC			15							15	1
	Level 5		Plain	1837-20thC								2		2	1
		Whiteware													
	Level 6		Oriental pattern	1830-20thC			2							2	2
		Locus 2 Total			**14**	**2**	**231**	**16**	**60**	**0**	**2**	**2**	**0**	**327**	**88**
		Sum total: Locu 1&2			**22**	**2**	**262**	**16**	**60**	**1**	**2**	**2**	**5**	**372**	**112**

Table 7.7: European ceramic types and their dates

At Frederikssted different types of imported ceramics were recovered from different locales and context including the plantation main house (Locus 1, 45 sherds) and the refuse dump pit at Locus 2 (372 sherds). The date range of the imported ceramics is between the eighteenth century and nineteenth century. However, the majority of the sherds have been dated to the middle to late nineteenth century. Most of the sherds also are without manufacturers' marks; however, they have been identified by their decorations as having British origin, an indication that British potting centres such as Staffordshire, Burslem and Liverpool dominated the pottery business during the

eighteenth and nineteenth centuries. The imported ceramics at Frederikssted also comprise mostly utilitarian vessels such as plates, mugs/cup, saucers and bowls, which were used to serve various types of food consumed by the late nineteenth century local occupants.

Imported European ceramics at Frederikssted are to larger extent similar to those retrieved from Frederiksgave plantation established in 1831 at Seseme. Comparable European ceramics excavated by Bredwa-Mensah and Crossland (1997, pp. 64-65) mostly comprised kitchenware (plates) which included types such as annular or banded ware, whiteware transfer printed in underglaze blue with willow designs, mocha decorated earthenware, and hand painted floral pattern. Again, these European ceramics compare well with British types excavated from eighteenth and nineteenth century context at Elmina (DeCorse 2001, pp. 152-153). This suggests that those who inhabited Danish plantations used similar materials as the locals and Europeans who lived in Elmina and the entire west coast of the Gold Coast. The prevalence of these comparable ceramics in coastal Ghana is an indication that they were imported either for trade with the local African population or for use by European administrators and garrisons working in the Gold Coast between the eighteenth and the nineteenth centuries.

Evidence of other European food related items such as sauce bottles and mineral water bottles could possibly represent material culture related to the affluent lifestyle of those local occupants who made Fredrikssted their home during the nineteenth century. The recovery of the two types of the German mineral water bottles (Steinike & Weinlig and J. Ferd. Nagel Söhne Hamburg), in particular, shows that these types of mineral water were occasionally drunk for prestige, as they could not have been drunk all the time.

Glass items have also been important containers for many consumables. Glass materials were among the numerous items that European colonials imported into the Gold Coast between the seventeenth and nineteenth centuries. Glass was used for different purposes: especially, it was used as containers for medicines, alcohol and alcohol related products such as beer, wine, spirits, bitters, wine glass and decanters, that were shipped from Europe to West Africa. Nonetheless, bottles have also been known to contain materials other than those they were originally manufactured for, thus having a variety of other uses during the seventeenth and eighteenth centuries. For instance, some of the Dutch gin bottles or any other bottle could contain other liquids apart from gin (DeCorse 2001, p.

159). McNulty (1971, p. 100) recounts the situation where products like syrups, olives, capers, anchovies, tuna, and toilet water (perfume) were all shipped in bottles.

Glass type	Date	Origin	Location		Total	MNI
			Locus 1	Locus 2		
Schnapps/Gin	1850	Holland		36	36	4
Champane/wine	1820	England		55	55	10
Beer	20thC	England		7	7	7
Bitters	1824	Venezuezla		2	2	2
Mineral water	1890s	Germany		4	4	4
Sauce bottles	1880	England	31		31	11
Total			**31**	**104**	**135**	**38**

Table 7.8: Food related bottles

It has been observed that during the seventeenth through to the twentieth century, gin, rum, brandy and wine became common European imports in Ghana. Particularly Dutch gin (Genever) and schnapps continue to be essential elements in the pouring of libations and for ritual offerings. These European spirits were also consumed as welcoming drinks, and as an aperitif just as gin is used even today (DeCorse 2001, p. 159). Most of the bottles believed to have contained alcoholic drinks from Frederikssted had no embossed marks nor carried seals, and this makes identification difficult. However, they are believed to have originated from Europe. J. H. Henkes Company, with its distinctive stork and star marks, founded in Holland in the 1820s, remains one of the common imported brands of schnapps in Ghana up to today. Glass items have been mentioned as essential items that were always part of European imports that ships carried to West Africa. They were specifically mentioned as items that "must be on board" in order to accrue the full benefit of the Europeans' trading activities in Africa (Bennett & Brooks 1965, p. 42). Apart from the decanters and the tumblers, all the other bottles (Table 6.24) which mostly contained consumable items have been dated to the middle to the late nineteenth century, a period when the plantation had ceased operations (post-plantation phase).

It must be stated that bottles found in West African contexts have a high chance of being reused, and those that archaeologists encounter in the archaeological context are often the fragmented ones, which can also move about extensively (Busch 1987; Staski 1984, p. 38). After their original content had been emptied, they assumed secondary functions as receptacles for both solid and liquid materials like edible oils, kerosene, salt, *pito* (local beer brewed from millet or sorghum) and sometimes decanted alcoholic drinks. This is similar to the non-industrial bitters still being produced in Ghana today. These bitters, prepared by individuals, are put in bottles in their secondary context. The preparation

comprises a mixture of spirits, wood/root chips, ground tree bark, leaves, crushed seeds, ginger etc. Bottles found in secondary context are commonly seen even in contemporary Ghanaian societies. The nineteenth century amber beer bottle found on the surface at Frederikssted (Figure 6.32B) and most of the bottles that served as containers are likely to have been reused in a secondary context. They could have been used and discarded by the initial/Danish occupants on the plantation, or the later local occupants carried them already empty from elsewhere to be reused at Frederikssted.

It seems the local occupants who lived on the plantation site during the nineteenth century and beyond adopted European cooking and eating practices through the use of European made aluminium cooking materials and cutlery. Items in this category are termed as *kitchenware* items (Figures 6.83 and 84). They include 1 fork, 2 knives, 2 metallic coal pot handles, 3 aluminium saucepan handles; all were found in the refuse pit at Unit 1 of Locus 2. The use of forks for eating, even in the twentieth century, was associated with elite eating behaviour. The fork is likely to have been used by the nineteenth century post-plantation local occupants. Indeed the use of the fork and other materials associated with these local occupants suggests that these later inhabitants at Frederikssted were local elite whose lifestyle was characterised by affluence. The discovery of two different types of knives might also suggest the prestige that the users attached to knives. In fact the actual use of the horn core knife is not clear, although it could have been used as a kitchen knife. The use of antlers, horn core, animal bones, and horn tips as knife handles dates to time immemorial as Mesopotamian cultures as well as Anglo Saxons are noted to have used such animal products to make tools, particularly knives (Moorey 2004, p. 114; Leahy 2003, p. 60).

The practice of using animal horn core as a knife handle is hardly known in the history Ghana; as such, that particular knife, together with the other metallic knife, likely originated from Europe, and may have formed part of the material culture of the local elite who lived on the Frederikssted plantation landscape. The folded knife may have been used for general household function apart from the kitchen. The folded knife was also used as a pocketknife, especially among men who used to move about with the folded knife in their pockets. The recovery of two different handles of iron cooking pots (at Locus 2) shows that the handles belong to two different iron cooking pots. This shows cooking behaviour that departs from the traditional Ghanaian cooking method, which employs the use of hearths plus firewood rather than charcoal placed in iron cooking pots.

Similarly, the recovery of aluminium saucepan handles (at Locus 2) also indicates evidence of the use of aluminium saucepans or bowls at the site.

The aluminium vessels may have been part of the European trade items in Ghana. The aluminium implement industry itself was initiated by Charles Martin Hall of Oberlin, Ohio in 1886 (Craig 1986; Hendrickson 2015, p. 403) and may have reached Ghana around the mid-twentieth century or after World War II. This is so because lightweight aluminium vessels and aluminium cookware became common in most parts of the world during the post-World War II era, as the use of aluminium materials was proscribed during the World War II period. Even though aluminium vessels were used in combination with local pottery, the inclusion of aluminium vessels at Frederikssted contrasts with the ubiquitous use of earthenware cooking and serving vessels in most homes in Ghana during the nineteenth and the early twentieth centuries. Again, this suggests an affluent lifestyle of the nineteenth century local occupants and an adoption of European cooking and eating practices.

Other consumable items obtained from the Frederikssted excavations which have also been ascribed to the nineteenth century local occupants are smoking pipes, comprising both local and European types (Figures 6.7 & 6.60). The two fragments of locally made clay smoking pipes recovered from the excavations indicate tobacco smoking by the African occupants during the post-plantation phase because pipes were the most common medium through which tobacco was smoked, although it could also be rolled in plain papers and plantain leaves. Tobacco was one of the essential articles, which the Christiansburg traders desired to purchase from the Portuguese or from Dutch interlopers (Nørregård 1966, p. 161). This probably led to its introduction on Danish plantations on the Gold Coast. Most of the clay pipes recovered from archaeological excavations in Ghana are locally made short-stemmed earthenware pipes. In this pipe, a hollow stick is inserted into the borehole of the pipe's short stem so as to lengthen or enlarge the stem. This also presupposes that such pipes were made by local potters, and they bear no evidence of mould seams as seen on white-clay European pipes (Handler 1997, p. 106).

The local clay pipes found in the Frederikssted excavations contrast sharply with the more common European-manufactured white clay pipes found in most historic/colonial sites in Ghana. Ozanne (1962, 1964) and Shaw (1961) have described and illustrated very similar pipes from late-seventeenth century archaeological sites of Shai (of which Dodowa is

part), particularly Adwuku, and old Accra. Shaw (1961) also excavated nearly a hundred fragments of locally made clay tobacco-pipes from Dawu (about 30km north of Dodowa). In linking the clay pipes produced in the Accra area and the Shai Hills as well as Dawu in Akuapim, there are striking similarities among the pipes, suggesting the existence of a pipe manufacturing centre in south-eastern Ghana during the nineteenth century when Frederikssted plantation probably had shut and was reoccupied by local people.

The use of white clay pipes for smoking tobacco was a favourite leisure activity of most European colonials in Ghana. In most European/colonial sites in Ghana, especially in the coastal areas, a number of pipe stems and bowls have been found in most archaeological excavations. Sometimes the use and the discard of most European made tobacco pipes can be attributed to the European elements in the Gold Coast who used them to smoke tobacco. As an American cultigen, tobacco is believed to have been introduced to coastal Ghana in the early seventeenth century, and, therefore, different types of pipes (local clay pipes and imported pipes) are datable to this period (DeCorse 2001, p. 163). The European smoking pipes recovered from Frederikssed (Figures 6.60 and 6.61) are plain, showing no designs or manufacturers' marks to allow for the determination of age and origin.

However, historical and archaeological researches have shown that a large amount of pipes that were traded and used in the Gold Coast originated from Holland, most especially during the eighteenth century (DeCorse 2001, p. 165) when production centres in Gouda, South Holland dominated the pipe business. Pipes therefore became one of the common trade items in the Dutch establishments in the Gold Coast, some of which may have been used in Dodowa Frederikssted plantation by the Danish/European and local residents. Apart from lack of manufacturers' marks, the Frederikssted pipes show further complications in determining their accurate age. This is due to fact that most of the pipes were retrieved from Unit 1, level 5 of Locus 2. They were mixed together with other material dating between the nineteenth and the twentieth centuries. Moreover, the pieces of pipe stems recovered from different stratigraphic levels at Locus 1 are also very small in number to make any meaningful assessment. Nonetheless, the European pipes were trade items and the fact that most of them were mixed with nineteenth century material at Locus 2 suggests that they are likely to have been used by nineteenth century local occupants in the post-plantation phase.

Bodily decoration/adornment

The nineteenth century local residents at Frederikssted utilized various types of material culture for bodily decorations. The artefacts in this category are the local and European beads (Table 6.26), cream/pomades (Figure 6.45), perfumes (Figure 6.42), clothing, (buttons, buckle), and finger ring (Figure 6.66).

In Ghana, both local and foreign beads have been used for bodily decoration, which sometimes may also carry social meaning to symbolise political status, religious affiliation, and cultural ceremonies. The combined use of both local and foreign beads by the nineteenth century local occupants at Frederikssted conforms to the idea that Africans cherish beads and, as such, made use of both imported and locally made ones to enrich their wellbeing. Other materials that were used by the nineteenth century local occupants at Frederikssted as part of bodily decoration were European toiletries comprising cream/pomades, which were used on the body for personal enhancement. It is also interesting to note that some of the perfumes were modified by the local occupants at Frederikssted to suit local usage. A typical example is the use of *ŋlongo* scented oil (Figure 6.42B) by the local women in Accra as an additive that was mixed with shea-nut butter for use as body cream. The local occupants at Frederikssted during the post-plantation phase may have also used the *ŋlongo* found at Locus 1 as an additive in locally obtained creams or other foreign creams.

Other evidence of bodily decoration and adornment associated with the nineteenth century local occupants comes in the form of clothing and personal items such as buttons and buckle, and a finger ring (Figure 6.66). Archaeological data from Frederikssted also provide some amount of information about clothing and other personal items. Plastic and metallic buttons as well as footwear buckles and a finger ring highlight the evidence of clothing and adornment on the Frederikssted plantation site. These items were all recovered from Locus 1. The finger ring was retrieved from Unit 4 Level 1, while the buckle was found at Unit 4 level 4, and the plastic button was also obtained from Unit 3 Level 2. The plastic button has been dated to the twentieth century, which suggests that it was used by the African occupants during the post-plantation phase. The buckle and the finger ring also look well preserved to be of eighteenth century materials. It can therefore be determined that these materials were part of the material used by the locals who occupied Frederikssted during the post-plantation phase. These items give indication

of the choices and taste of the occupants and how they may have looked while living on Frederikssted landscape during the nineteenth century post-plantation period.

Child rearing

Child rearing was an important aspect of the nineteenth century post-plantation life at Frederikssted. This is evinced by the recovery of porcelain doll parts and steel reeds of a harmonica.

This research offers the opportunity to give special attention to childhood experiences at Frederikssted plantation, as evidence of childhood experiences in archaeological researches in Ghana is very much limited. Some of the material culture from Frederikssted shows that children were present at the plantation site who played an active role in determining both the social and material world of the plantation landscape. The material culture related to childhood on the plantation concerns childhood entertainment materials, comprising dolls/toys and a musical instrument (Figures 6.22 & 6.80). Large numbers of porcelain dolls were made and used in Europe during the second half of the nineteenth century. The most famous makers of dolls during the late nineteenth century were Kammer Reinhardt (who made German Kaiser baby dolls) in Germany. Another German firm Voit and Fleischmann, as well as Jumaeu Company of France, and many others also were in the busines of doll making (Blakeman & Smith 1983, p. 30; Prichett & Pastron 1983, p. 326). Until World War I, the largerst production centre of ceramic dolls was Germany, particularly in the areas of Saxony and Thuringia (Prichett & Pastron 1983, p. 326). In England, pottery factories at Staffordshire also manufactured dolls around the later part of the nineteenth century through to the twentieth century, especially during the reigns of Queen Victoria and King Edward VII between 1901 and 1910 (Blakeman & Smith 1983, p. 30). At the same period the English also made other ornamental figurines and trifles for less wealthy admirers to display in their homes and for use by their children (Prichett & Pastron 1983, p. 326).

Apart from functioning as play objects and entertainment for children, dolls were sometimes used as mannequins in the nineteenth century. They were used to model miniature versions of new styles of clothing from Paris or other fashion centres; however,such fashion dolls can hardly be distinguished from those that were used for entertaiment. While such use of some dolls cannot be discounted entirely, other evidence

from the Frederikssted material culture such as slate and slate pencils, and part of a little mouth organ, suggest the presence of children on the plantation, and that dolls functioned as playthings or entertainment objects for the children.

The clothing and the hairstyles depicted on dolls were contemporaneous with the fashion current at the time of manufacture of the dolls; as such, these traits (clothing and the hairstyles) can often be used as chronological indicators to date the dolls (Prichett & Pastron 1983 & 321) and perhaps the archaeological site where the dolls have been found.

The porcelain dolls found at Frederikssted excavations were in two parts, comprising a shoulder-head and a single leg. The dolls, which were recovered from Unit 1 at Locus 2, have been identified as China dolls, though they were made in Europe , particularly in Germany (porcelain itself was known as China because of its origin in China). According to Scott (2010, p. 87), China dolls were made and became desireable from the 1840s to the early 1900s during which time their usage became widespread in different parts of the world including the West coast of Africa. Pearson (1992, pp. 11, 41, 179) also notes that many of the dolls made in the mid-nineteenth century were China dolls, characterised by a head which was usually glued, nailed,or sewn onto a cloth or leather body or torso. In the case of the shoulder-head doll from Frederikssted, it has no peforation which suggests that it was glued to the body. Having identified the time period in which these dolls were made and used (mid-nineteenth century), it stands to reason that Frederikssted plantation landscape was occupied by an elite indegenous family, long after the collapse of the plantation in 1802.

On the basis of the stylistic analysis of the doll parts at Frederikssted, it appears that the dolls as artefacts reached Frederikssted at a relatively later date. While the dolls can attest to what can be considered as European material culture, they provide a well understood chronological framework in relation to the ocupation of the Frederikssted plantation site, providing evidence in suport of the period of reoccupation of the Frederikssted plantation lanscape. Prichett and Pastron (1983, p. 326) asserted that the mid-nineteenth century porcelain dolls that were made were elegant fugurines and expensive doll heads. They were therefore only affordable for comfortable families. This presupposes that the later occupants or those who continued to occupy Frederikssted were affluent people, possibly a local elite family. The attempt at describing and analysing the implications of dolls

recovered from Frederikssted plantation site represents the attempt to give attention to the potential significance of dolls as time indicators in historical archaeology in general.

The examination of the material culture and life experiences of childhood on Fredrikssted plantation landscape shows how the occupants on the plantation understood the concept of childhood as a distinctive phase of life different from adulthood. As materials made for the enjoyment and socialisation of children, dolls/toys also have an essential role to play in understanding childhood and family life, as well as site dating and exchange patterns (Davies & Ellis 2005, p. 15). Children on the Frederikssted plantation were not cut off from their counterparts who lived outside of the plantation landscape. The intention of adults to either purchase or make education/entertainment items such as dolls may represent a particular belief in the future welfare of children. Luxurious playthings may symbolize parents' dreams of upward social mobility for their children (Wilkie 2000, p. 101). This reflects the presence of a wealthy and educated local elite who were accustomed to the use of European material culture and also sought to educate and entertain their children with the use of European materials. This shows the level of acculturation and the desire of these locals to acculturate their children also into the European culture.

The recovery of reeds of a harmonica/mouth organ (musical instrument) indicates another aspect of children's entertainment which involved music. The harmonica, invented and patented in the early 1820s, may have been used by children of families who occupied the Frederikssted plantation landscape after the plantation was shut. In general, children of all socio-cultural backgrounds leave little material culture of their experiences in the archaeological record (Kociumbas 1997, p. xvi); moreover, there is no documentary or historical evidence suggesting the presence of children on the Frederikssted plantation. These materials therefore represent the fact that children were a prominent part of the post-plantation family and social life. The few materials they used and discarded are clear evidence that children were part of the families that reoccupied the plantation landscape in the nineteenth century. This is hardly mentioned in historical documents.

Literacy

The archaeological evidence has provided some indication that the nineteenth century local occupants were literate people. The presence of writing slates and slate pencils

(Figures 6.63 & 6.64) is an indication of reading and writing, education and literacy at the Frederikssted plantation site. The writing materials may have been used by local adults for writing purposes (for record keeping in trading activities) as paper was uncommon and expensive. Moreover, the writing materials may also have been important teaching materials for children. It means that adults had acquired the skills to teach them and that literacy as an European phenomenon had been embraced and was valued by the nineteenth century local occupants at the plantation landscape.

Economics/trade

Economic wellbeing was an important aspect of the life of the nineteenth century local occupants at Frederikssted plantation landscape. They thus engaged in different economic ventures to create opportunities for generating income and wealth. The excavated artefacts show evidence of local bead manufacture and probably sale of foreign beads. There is also evidence of sewing (Singer sewing machine part and scissors), the use of wine barrels (barrel hoops) for different kinds of trade items, and weighing scale (hook).

Even though Ghana originally did not produce glass, the presence of glass beads in Ghana dates long before the arrival of European ships at the Guinea Coast (Lamb 1969). Beads have also been made from seeds, cowry shells, animal teeth and bones, but these do not go through an elaborate manufacturing process apart from drilling holes in them for stringing and occasionally limited shaping. The number of locally manufactured beads recovered from the excavations was 192 (Table 6.15); all were recovered from Unit 1 of Locus 2. The local beads were generally polychrome with different shades of blue and white applied either as annular bands or stripes onto a dominant yellow background. However, one bead (Figure 6.3 F) was identified as having a prussian blue colour with white circular decorations. Two types of local beads were identified based on the type of mould in which they were placed. The moulds have been identified as vertical (produced shorter beads) and horizontal moulds (produced longer cane beads). Vertical beads numbered 73 and they were generally characterised by annular bands in blue colour while the horizontal beads were 119 and were striped with blue and white lines. The beads mould were all excavated from Unit 1 of Locus 2. The vertical bead moulds were 56 pieces and the horizontal bead moulds were 5 pieces in number

The presence of local beads and their manufacturing accoutrements (bead moulds, Figures 6.5 & 6.6) shows evidence of a cottage industry at the Frederikssted plantation

site, involving the production of beads by the use of the powder glass, and this activity might have been associated with daily life on the plantation landscape. The distribution of the local beads and the bead mould, in the context of mid-nineteenth century materials (at Unit 1 locus 2), suggests that the production of the beads could possibly have been carried out by the free people who reoccupied the plantation site after the collapse of the plantation. They probably took advantage of Dodowa as a trading centre to sell the beads manufactured from the site.

In Ghana, beads have also been obtained from imported sources, apart from the locally manufactured beads. These imported beads were/are made from a variety of materials such as carnelian, jasper, agate, bauxite bearing rocks, and other harder rocks and stones. Metals such as gold, brass alloys, iron, aluminium, bakelite, rubber and modern plastics have all been used as materials for beads and sold in Ghana since the 1600s. The imported beads obtained at Frederikssted (Table 6.26) excavations are Prosser beads, drawn beads, Carnelian stone bead, Venetian wound bead, Monochrome cylinder beads, and Blue heart bead. These foreign beads could have been traded alongside the locally manufactured ones by the local occupants during their time of occupation in the nineteenth century.

Imported beads			**Location**		
Bead type	**Origin**	**Date**	**Locus 1**	**Locus 2**	**Total**
Prosser beads	Bohemia	Mid 19th C-20thC	8	3	11
Drawn beads	Venice	15thC-19thC		59	59
Carnelian stone bead	India	500BC-20thC		1	1
Venetian wound bead	Venice	1600s-19thC		1	1
Monochrome cylinder beads	Bohemia	Mid-19th C-20thC		29	29
Blue heart bead	India	19thC-20thC		1	1
Total			**8**	**94**	**102**

Table 7.9: Types of imported beads, origins and dates

Eight Prosser blue beads that were obtained from Unit 4 of Locus 1 (the main house) and dated to the 1860s are consistent with the argument that Frederikssted plantation main house was reoccupied (likely by local people) in the nineteenth century. All the rest of the imported beads (94) were found in Unit 1 of Locus 2. Even though some of the beads such as Venetian drawn beads, Carnelian bead, and wound beads may date to the plantation phase era, they are believed to have been used and discarded by nineteenth century occupants after the plantation phase. This is evidenced by their association with other mid-nineteenth century artefacts in the same stratigraphic context of Unit 1 at Locus 2.

Two objects related to sewing (sewing machine part and scissors [Figures 6.77 & 6.78]) were obtained from Unit 1 level 5 of Locus 2. In Ghana sewing machines have been used for both commercial and private purposes. The commercial users comprise stationary tailors/seamstresses as well as itinerant *alteration* operators. Some homes may also have private sewing machines used to mend clothes only at the household level. Apart from cutting and trimming clothes, the scissors could also have been used for barbering. The evidence of Singer sewing machine (invented in 1851), and scissors (nineteenth century) at Frederikssted could possibly have been used for commercial purposes by later local inhabitants who reoccupied the plantation site during the post-plantation period. The presence of these materials indicated that the local family who reoccupied the plantation site had acquired European sewing skills to create another form of economic activity to enhance their economic wellbeing.

Thirty-four (34) barrel hoops (Figure 6.74) were obtained at Frederikssted excavations. Those recovered from Locus 1 were 10 in number and at Locus 2, 24 were obtained. The barrel hoops were used to fasten wooden casks that were used to store or transport both liquid and non-liquid items. The presence of barrel hoops in the Frederikssted excavations suggests two explanations. First, it is an indication that some alcoholic products were shipped to West Africa in wooden casks/barrels as bottles were expensive and were in limited use for wine storage even in Europe until the eighteenth century (DeCorse 2001, p. 159). The presence of the barrel hoops clearly shows that at Frederikssted plantation, wine was stored in casks before it was decanted into other smaller vessels (mostly bottles) for serving. This affirms McNulty's (1971, p. 99) assertion that in Europe during the seventeenth century bottles were filled with wine from casks kept in the basement and then placed in cooling tubs for consumption. However, the use of bottles to store wine was preferred to casks because bottles preserved wine better than wooden casks, which were frequently opened. Bottles allowed the wine to continue to age 'undisturbed' and improve. Most likely, during the period of occupation of Frederikssted plantation landscape, the practice of storing wine in wooden casks had not waned.

Secondly, barrels also have general utilitarian purposes, functioning as the container of choice for a wide range of other commodities (Work 2014, p. 12), particularly flour. The wooden casks could also have served as containers for fresh water that the Europeans used on ships during their voyage to West Africa and they could readily be reused to serve

secondary functions to store either food or non-food materials on the plantation. The local occupants at Frederikssted in the nineteenth century most likely reused the metal hoops to strengthen other barrels used to transport palm oil to Europe.

Another archaeological indication of the vigorous trading activities of the nineteenth century Frederikssted local occupants is the discovery of the hanging weighing scale hook (Figure 6.75A) retrieved from Locus 1 during the excavations. The hanging scale was used to weigh trade goods that were to be shipped to Europe. This suggests that the local occupants were ardent merchants who weighed all the trade goods they bought before either exporting them to Europe or retailing them to other European merchants. This also reveals that the local merchants became active participants in trade and amassed wealth, as they became part of the global economic system, which was championed by Europeans during the nineteenth century.

The presence and primary function of the perforated coin (Figure 66B) as a legal tender helps to suggest that an active cash economy existed at the site, reflective of buying and selling which was one of the principal activities during the post-plantation period. The recovery of only one coin in the excavation, however, makes it doubtful that the occupants carried or kept copious amount of coins on them, as barter was still an important aspect of trade and exchange even up to the early part of the twentieth century.

Farming

As part of their subsistence activities at the Frederikssted landscape, the nineteenth century local occupants engaged in farming activities to produce food for domestic consumption. This is evidenced by the presence of three types of farm tools among the excavated artefacts.

Farm tools among the Frederikssted artefact assemblage consist of machetes (Figure 6.74), for weeding and harvesting, hoe blade fragments (digging), and a splitting maul, for felling trees. The two machete pieces and the two hoe blade fragments were retrieved from Locus 1, while 1 whole machete metal blade (Figure 6.73) was also recovered from Unit 1, Level 5 of Locus 2. The farm tools recovered from Frederikssted excavations (machetes and hoe) are indeed similar to those recovered by Bredwa-Mensah (2004, p. 217) from nineteenth century contexts at Frederiksgave plantation site at Seseme village. The handles were made of wood but had rotted away. The machete is similar to the

popular modern machete used for harvesting, clearing weeds and cutting down smaller trees and some other domestic tasks. These tools were used during the post-plantation phase. This suggests that the local occupants did not entirely adopt European material culture but also saw the need to produce and use local food resources with the use of local farming tools.

Ornamentation

The archaeological data has also provided information related to ornamentation used by the nineteenth century local families at Frederikssted. Artefacts such as the Whieldonware (Figure 6.10), pierced-edge porcelain (Figure 6.20), dressing mirror (Figure 6.48), bedknobs (Figure 6.79), lantern shades (Figure 6.49), and curtain wire hook (Figure 6.75B) were likely used for beautification of the home and symbolic purposes. The Whieldonware vessel in a shape of a fish was most likely used as a vase. In addition, the pierced edge porcelain might have been used symbolically, commemorating British or Danish monarchs during the eighteenth century.

The mirror fragments display characteristics such as thin width, brown back-painting, and traces of silvering. These characteristics suggest that the mirror was used as dressing mirror. The bedknobs were used as decorating materials used for aesthetic purposes during the nineteenth and the twentieth centuries. They were attached to metal beds as decorations, perhaps for the purpose of ostentation and high status living. The lantern shades were used as general light sources for outdoor and indoor areas at night. The curtain hook on the other hand was used to hang curtains in front of the door and windows. The use of these items by the nineteenth century post-plantation local occupants suggests high-class status and that those local occupants were a wealthy family who could afford ostentations and embellishments. This lifestyle may have also resulted from their contacts with European merchants in Dodowa and their quest to adopt European lifestyle because these European materials were readily available for sale in Lower Dodowa.

7.5 Lower Dodowa, Nineteenth Century Emporium

Historical documentation about Dodowa as a single settlement is in fact difficult to obtain. The history of Dodowa is generally subsumed into the general history of the Shai/Sɛ ethnolinguistic group who until 1892 were inhabiting the hilly part of the Accra plains. In 1892 the British colonial administration expelled the whole Shai settlement which led

to the formation of scattered modern settlements like Dodowa, Agomeda, Ayikuma, Dayroom, and Kodiabe.

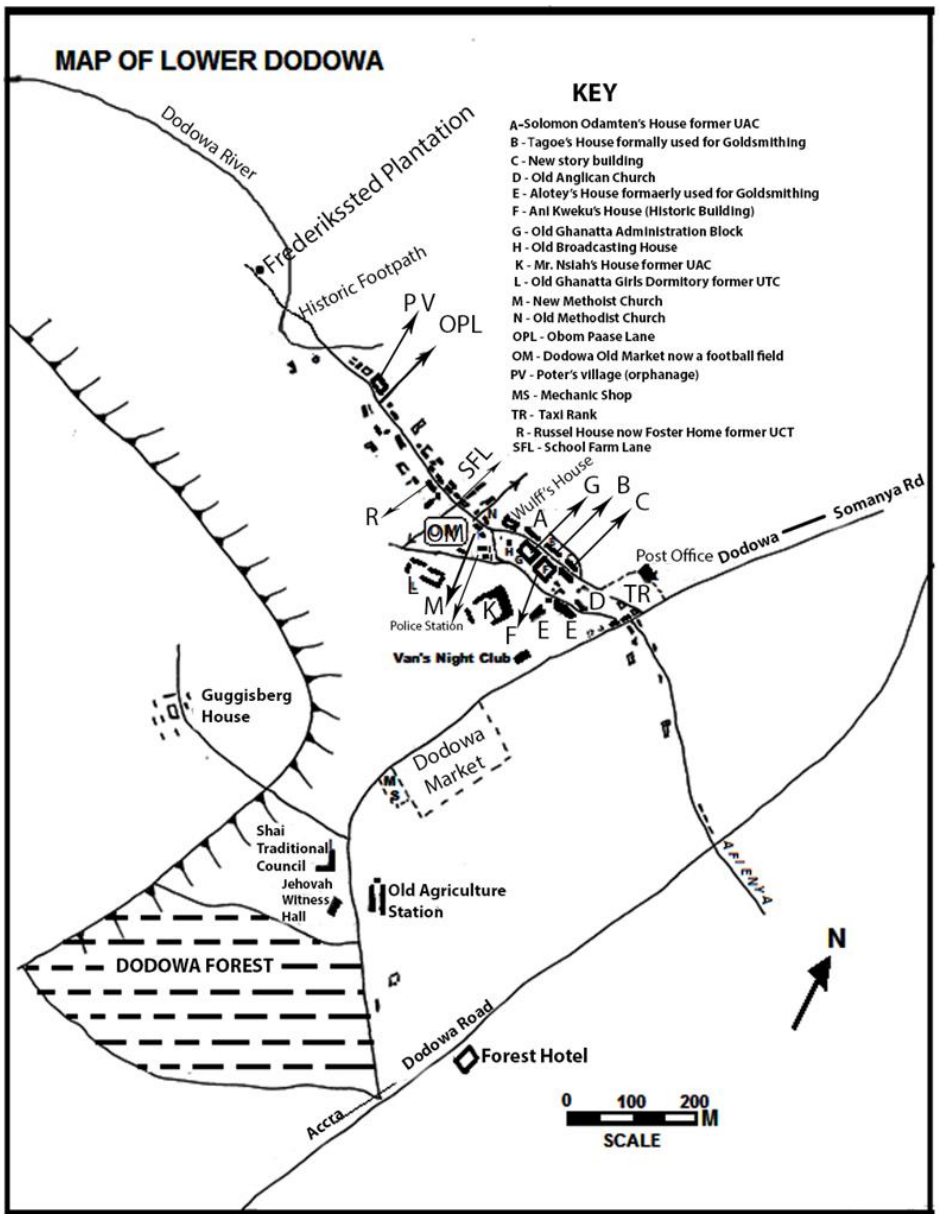

Figure 7.2: Map of Lower Dodowa

Much of the information from recent studies focusing on Dodowa comes from ethnographic studies concerning ethnomedical practices, pottery industry, and a rite of passage known as *Dipo*, which are also practiced in all other Shai settlements (Anquandah 1997, 1986).

This section examines the post-plantation economic activities in Dodowa, particularly the Lower Dodowa suburb which became a bustling business centre from the nineteenth to the twentieth century. One of the impacts of the Danish plantation/political economy was the growth of trade and exchange in Lower Dodowa as that section of the town became a famous business and residential area for Danish, local and other European merchants. Some of the residences and former business outlets are still extant in present day Dodowa. However, none of the residents of Lower Dodowa has any knowledge of the exact identity of the Frederikssted plantation house even though they had seen it in the bush.

Since there is no research on this class of Dodowa society, the data used here were obtained through oral interviews I conducted in Lower Dodowa during the fieldwork in 2015. The informants comprised the elite and living descendants of both Danish/European and indigenous traders who lived at Lower Dodowa during the nineteenth and the twentieth centuries. It is difficult to determine the number of European merchandise outlets that were established; nonetheless, during the interview it was observed that nine (9) of such business outlets are still extant, most of them serving as houses for the living descendants of the initial owners. Some of these shops were owned by European multinational companies such as the United African Company (UAC) associated with the British and Union Trading Company (UTC from Switzerland), which was associated with the Basel Mission in Ghana. Individual European merchants (Joseph Wulff and Russel) as well as individual local merchants also owned and operated shops in Lower Dodowa. One UAC shop/warehouse, now owned and occupied by one Mr Nsiah and Wulff's house (occupied by living descendants) have been discussed in this section.

The uniqueness of Lower Dodowa was as a result of contact situations that were created there through human diversity, settlement pattern, exchange (trade) and the desire to control the exchange (Cusick 1998a, p. 4). This encounter which began with the establishment of Frederikssted plantation in 1794 culminated in different contact situations between Europeans and Africans who settled there for trading purposes. In Lower Dodowa the indigenes who emulated the European merchants also became avid merchants and they still have their family and property existing in present day Lower Dodowa. This class was consolidated out of the remnants of the old plantation mercantile system that existed in Dodowa as they emerged due to financial liberalization and

privatization brought about by the plantation economy. These black/African bourgeoisies also resided in the inner community known as Lower Dodowa (because of its low lying terrain) where a different system of economy and social authority became established. These new local bourgeoisies, who also traded with the Danes and other Europeans on a daily basis, maintained a unique settlement pattern in Lower Dodowa. The "new" suburb was well laid out with two major paved streets which sectioned the suburb into three. The architectural styles of their residential buildings were reminiscent of colonial architecture, comprising storeyed buildings that had the various floors made of wood. They used distinct material culture such as European ceramics and canned fish, and drank tea and coffee.

The changing consumption patterns of these indigenes towards a preference for European imported materials reflected greater local participation of "elites" in a global consumer culture. This consumption pattern at Lower Dodowa reflects some of the material culture at Frederikssted plantation site, and it is possible artefacts like food related materials, dolls, and education materials could well have been used by elite local people who occupied Frederikssted after the plantation collapsed.

Apart from the European multi-national companies like United African Company (UAC, British) and Union Trading Company (UTC, Swiss), other public institutions like the police station, post office, wireless transmitter station (radio) and the local Methodist Church were all established there due to its pre-eminence as central business district of Dodowa. The elders still have fond memories of Lower Dodowa as it became the umbilicus of the entire Dodowa township from the beginning of the nineteenth century to the mid twentieth century.

A B

Figure 7.3: Colonial buildings and streets at Lower Dodowa

Å B

Figure 7.4: The New Methodist Church (A) and the one (B) at Lower Dodowa

Figure 7.5: Dodowa Post Office also located in Lower Dodowa

UAC warehouse

A metallic sign-board was found at the premises of a former UAC shops/warehouse (currently the house of one Mr Nsia) with the inscriptions: JOHN WALKDEN &CO. LTD ASSOCIATED WITH THE NIGER COMPANY LTD. At the centre of the board is the ensign of the Royal Niger Company (operated mostly in Nigeria). The emblem comprises black Y with the words 'ARS', 'JUS', and 'PAX' written on the arms, surrounded by a red ring, representing Nigeria in its entirety which also formed the basis of the modern state of Nigeria (Akpeninor 2013, p. 183). The two arms of the **Y** represents the north-west and the north-east respectively, while the upright stem unites both regions up to the coast.

John Walkden & Co. Limited was a Manchester company that was one of the prominent British companies in West Africa that sold Europeans manufactured goods in West Africa and also traded in palm oil to Europe (Lynn 2002, p. 138; Olukoju 2004, p. 13). John Walkden & Co. Limited operated in Lower Dodowa as an outlet of The Royal Niger Company, which was also a mercantile company chartered by the British government during the latter part of the nineteenth century. The company was chartered in 1879 as the United African Company (UAC), which also registered a strong presence in the Gold Coast from the nineteenth to the twentieth century. It was renamed the National African Company in 1881 and in 1886 it was again renamed as the Royal Niger Company. Despite its relatively short period of existence (1879 - 1900), the Royal Niger Company strongly influenced the formation of colonial Nigeria and also formed a bulwark against the state supported protectorates of Germany and France (Akpeninor 2013, p. 184).

A B

Figure 7.6: Former U.A.C store/warehouse bought by an indigene from the British company in 1961 (A) and a sign-board (B) of The Royal Niger Company found in the same house at Lower Dodowa

Joseph Wulff's house

Joseph Wulff (1809-1842) was a Danish Jew who arrived in the Gold Coast in 1836 to work as administrative assistant at the Danish headquarters (Christiansburg) in Accra (Winsnes 2013). While in Accra he became an avid merchant by combining trading in slaves and other non-human goods or "legitimate" items in the nineteenth century. He established two merchant houses. The main one was built in Accra and was known as Frederiksminde, while an outlet was put up at Dodowa. He had a Ghanaian family and some of the descendants still live in Accra today. His merchant house, together with some of his trading accoutrements, is still standing in Lower Dodowa. His main merchant house and grave are also still extant in Osu, in Accra. One of his main responsibilities was to make regular visits to the Danish plantations and send reports (letters) to the Danish Crown in Denmark. Some of his letters have been accessed by Winsnes (2013) detailing his work, biography and family life in the Gold Coast.

A visit to the house of Joseph Wulff in Lower Dodowa revealed other items of historical interest. The house comprises a first floor built with concrete and wood. The staircase and the floor of the second level are made of wood and the corrugated aluminium roofing sheets are supported by wooden frame and additional wooden pillars that were used to create a porch around the entire house. The house has a compound of about 40m² which was used as a garden to plant fruits and vegetables.

Figure 7.7: House of Joseph Wulff in Lower Dodowa

There are also two metal basins of which one has an image of a flying worker-bee embossed on its outer surface. The metal basins are believed to have been used in the palm oil trade, and the bee embossment was probably a trademark.

A B

Figure 7.8: Metal basins with an embossment of flying bee, probably used in palm oil trade

There is also a weighing scale of British origin in the house. According to some living descendants who still live in Wulff's House, the scale was used to weigh trade goods that Joseph Wulff had bought and were meant for export to Europe. The scale has the inscription:

TO WEIGH= 200 WT
HENRY POOLEY & SONS
BIRMINGHAM

LONDON

The scale is, however, being used as bridge over a gutter that runs in front of the house. The house is still occupied by some living descendants of Joseph Wulff who still reside in Dodowa Lower town suburb.

A B

Figure 7.9: Henry Pooley weighing scale found in joseph Wulff's house (A). B is a similar scale with the same inscriptions. www.historyofwallasey.co.uk (20-07-15)

Henry Pooley was a British mechanical engineer whose company Henry Pooley & Son Ltd of Birmingham, London and Liverpool specialised in the manufacturing of scales and weighing machines such as railway weighing bridges as well as different types of scales meant for local usage (in England) and for export. The firm was founded in Liverpool in the 18th century and was initially known as Pooley of Liverpool in Heath Mill Lane, Birmingham. Henry Pooley senior, who first established the company in 1790, began with manufacturing of scale beams. The firm started making railway platform scales and other scales around 1835. The company's headquarters was at the Albion Foundry, Liverpool until 1890 when it relocated to John Bright Street, Birmingham. The firm was responsible for supplying and maintaining the weights and scale of many railway companies. (www.gracesguide.co.uk/Henry_Pooley_and_Son: 20/08/15). The presence of the Henry Pooley weighing scale in Dodowa confirms rigorous business activities spearheaded by different European companies and nationals in Dodowa.

Chapter 8

Conclusion

The conclusion evaluates the significant information that the material culture from the excavations reveals in the light of its contributions to knowledge and historical/plantation archaeology. In the era before the nineteenth century, the primary motivations of Europeans in West Africa were to deal in gold, slaves and ivory and not agricultural products. The onset of the trans-Atlantic slave trade, however, brought about the provisions trade, which was developed with the aim of providing food supplies to slave ships in the Middle Passage to the New World. The provisions trade become a precursor to the development of "legitimate commerce" in West Africa and later developed into plantation agriculture during the latter part of the eighteenth century. As time went on, further stimulus for the creation of larger farms or plantations was provided by the abolitionist movement, and the Danes were seen as the only European nation who had the ambition to establish plantations. After P.E. Isert's pioneering efforts in 1788, there were other ambitious attempts to establish larger farms or plantations.

The Frederikssted plantation archaeology has established African historical archaeology appropriately integrates the archaeological data, European documentary sources and indigenous oral accounts. This integration challenges the Eurocentric definition of historical archaeology. The African element (oral histories and traditions) in historical archaeology can be used to illustrate the varying nature of the European contacts in Africa; especially, we will be able to better understand the technological, social, and cultural changes within the indigenous African societies during the period of African-European interactions. The study of Danish plantation economy in Ghana is very significant in this regard because it has the potential for integrating the archaeological record with the written records as well as with oral histories and traditions. In this circumstance, we are able to explore not only the European documents and the archaeological data but also oral accounts from the indigenous people in order to understand a variety of themes, such as ethnicity, economic activities, status differences

and gender roles within the various indigenous societies that were part of the Danish plantation system.

The establishment of the Frederikssted plantation in Dodowa in 1794 as part of the Danish political/plantation economy in the eighteenth century did not only enslave the indigenous people, it also inspired some local people of Dodowa to undertake different economic activities and achieve varying levels of economic wellbeing. The aftermath of the Danish plantations system in Dodowa was characterised by formation and growth of the Dodowa polity and expansion of trading activities involving other European multinational companies such as United African Company (UAC, British) and Union Trading Company (UTC from Switzerland) as well as some individual local and European merchants. Dodowa thus became incorporated into the global economic system due to its involvement in trading activities that were introduced by the Danes.

Frederikssted material culture in terms of occupation and reoccupation

The Frederikssted archaeological data provide information on the lives of the Danish planters and the local people who later lived on the plantation landscape. It is appropriate to pose some pertinent questions about the general overview of the Frederikssted material culture and use the succeeding discussions to answer them. The discussion focuses on material use by the European/planters and local people who later occupied the plantation site, and how these materials offer new knowledge about plantation archaeology in general. As a residential and business place of both Danes and locals, how have the excavations at Frederikssted plantation taught us something new? What do the artefacts from Frederikssted tell us about life on the plantations? How do the findings compare with other Danish sites in Ghana as well as some New World plantation? For many years since archaeologists started excavating plantation buildings (planters' houses) and slave quarters, food, shelter, tools and clothing have been studied as some of the more obvious needs of plantation occupants.

The Frederikssted findings have mainly comprised sherds of local and European ceramics, bottle/glass materials, tools, industrial and household materials, bones of butchered and hunted animals as food, beads, personal items and education and entertainment materials. These artefacts found on the Frederikssted plantation are similar to those found on other nineteenth century Danish sites such as Frederiksgave, Brockman

and Bibiase plantations by Bredwa-Mensah (2002, 1996a; Boachie-Ansah 2007b). These similarities reflect the occupancy of the same Danish colonials. However, the Frederikssted findings contain some artefacts that were later in time (after the plantation shut in 1802) and signify the reuse of the plantation landscape during the nineteenth and the twentieth centuries. This therefore suggests a significant degree of continuity encompassing the plantation period and post-plantation period. The period after the collapse of the plantation saw a different category of people reoccupying the site. One major focus of this thesis is to show that the archaeological data from Frederikssted represent both plantation/slavery and the post-plantation period, when free local elite people reoccupied the site. Therefore, the Frederikssted archaeological data seem to support a hypothesis of a distinguishable artefact pattern belonging to the plantation context as well as post-plantation context.

It can therefore be concluded that the excavations at Frederikssted plantation comprising Locus 1 and Locus 2, and the finds and their distribution within the excavated units, demonstrate that the plantation landscape is a place of occupation and reoccupation. The material remains show varied dates spanning the eighteenth to the twentieth centuries. The materials represent reoccupation at the site. This suggests that the assertion made by Jeppesen (1966, p. 53) that Frederikssted plantation abruptly fell into disuse and was abandoned in 1802 cannot be accepted uncritically. The issue of reoccupation or later occupation is unequivocal at Locus 2 where nineteenth century house trash was found located under a building foundation. The stone foundation, which was laid on top of the refuse dump (belonging to the nineteenth century post-plantation era), is believed to have been built and occupied at a later stage.

Frederikssted archaeological data sufficiently correspond to the archaeological data described by Armstrong (1990) at Drax Hall plantation in Jamaica. Data from Drax Hall focused on European planters and Afro-Jamaican slave patterns and revealed that there were free people or former slaves who continued to occupy the Drax Hall plantation landscape after emancipation. However, their living conditions were characterised by a shift in dietary patterns, decline in house size and marginal economic conditions emanating from economic and food stress (Armstrong 1990, pp. 270, 275, 276). Armstrong (1990, p. 269) observed retention of the style of the housing structures, which probably indicated an expression of a conservative preservation of customary patterns

established during the days of slavery. Nonetheless, artefact evidence from Frederikssted at Dodowa suggests improved conditions for at least some local people after the plantation. The use of imported elite goods by the post-plantation local occupants might also suggest status differences in the local population. Local elites at Frederikssted acquired wealth through continued ties to the international market and the rest of the local population.

Plantation architecture generally comprises two types, the planters' house and the slave quarters. In North America, the main plantation buildings and the slave cabins most likely served as living areas for non-slave residents. In Cuba, the *batey* (main plantation building), together with the slave settlement in the form of *Bohios* and *barracons* found within the enclosure of a fence wall and excavated by Singleton (2015; Singleton & Souza 2009), may have contained evidence of the existence of free and unslaved residents who may have used the areas as places of abode. Similarly, the main Brazilian plantation houses, as well as the slave quarters known as *senzalas*, most probably became houses to other people after the initial abandonment when the plantations were shut. In all these excavations, the materials were interpreted as emanating from only the European planters/masters and their slaves.

In contrast, the various materials retrieved from Frederikssted with their varied dates (between the eighteenth and the twentieth century) therefore provide the basis for the definition of distinctive material culture belonging to the plantation (slave) era as well as materials pertaining to the post-plantation period. Eighteenth century Frederikssted had a pattern of artefact use characterised by materials that were dated to the eighteenth century or earlier and were limited to Locus 1. Again, artefact patterns related to the plantation era can be described as those of elite material culture belonging to the Danish planters' household. Good examples are the eighteenth century materials such as Royal Copenhagen porcelain, barrel hoops, the decanter, wine glasses and the tumblers. The plantation phase was also marked by short period of occupation and low proportions of material use as most of the artefacts excavated belong to the post-plantation phase. Later occupants likely may have obliterated most of the earlier deposits belonging to the plantation phase.

The post-plantation materials form the majority of the artefact inventory. The artefact pattern in this period suggests a high proportion of machine cut iron nails, which were

first made at least in the1800s. The European transfer printed ceramics made in the 1820s also constitute an important category of material used at Frederikssted during the post-plantation phase. The glass materials (apart from the tableware) also show a high proportion of post-plantation material culture. Education and entertainment artefacts, the kitchenware materials, foreign beads, and evidence of sewing throw more light on the elitist lifestyle of the local occupants during the post-plantation period.

Evidence of local beads and their manufacturing accoutrements found in the same context as the nineteenth century European materials give a strong indication of the existence of indigenous people who made local beads, also acquired foreign beads, and used both utilitarian and non-utilitarian European ceramic materials.

The nineteenth century post-plantation materials may indicate a retention of a pattern quite similar to the plantation era materials. The dominance of European materials from Frederikssted excavations, some of which comprised fine ceramics, glass materials, cutlery, metallic objects, writing materials, and entertainment materials all show the elaborate lifestyle of the elite class (local elites) on the plantation, and show how life was lived during the post-plantation era. Even though determination of socioeconomic status from the archaeological record can be controversial sometimes (Lewis 1985, p. 122), the foreign materials from the Frederikssted excavation incontrovertibly constitute part of the material world of an elite class on the plantation. They may also indicate adaptive behaviour or retention and revitalisation of African elements on the Frederikssted plantation. The adaptive behaviour concerns the situation where local people used European scented oil *(ŋlongo)* as an additive to shea-nut butter for use as body cream. The presence of wild fauna, indicating hunting activities, and making of handicraft (bead making) all indicate how the Africans who lived on the plantation (during and after the plantation) adapted the situation on the plantation landscape to enhance their wellbeing.

The thesis has also unearthed issues related to ethnic identification, and social change, as well as retention of African-derived material culture, which has utilitarian, aesthetic, and symbolic functions. The prevalence of the carinated vessel form of the locally manufactured pottery gives a hint of the ethnic identity of the local occupants of the Frederikssted landscape. Carinated pottery shows the influence or the presence of Akan/Akuapem people at Frederikssted who probably were the local elite who reoccupied Frederikssted during the nineteenth century. This may also suggest retention and

revitalisation of Africanism on the plantation in the midst of copious European material culture and its acculturative effects.

The European materials at Frederikssted have been very significant, representing in Africa the impact of European cultural contact. Materials related to alcohol (beer, wine/champagne, gin, schnapps, and bitters) show alcohol consumption, and this may have been a response to stress and boredom that the few transplanted European planters experienced on the plantation. The post-plantation local occupants also developed a taste for these alcoholic beverages; they either consumed them or traded them as part of their merchandise.

The European materials also highlight the phenomena of acculturation and hybridisation where the indigenous people blended elements of European culture with their African ways of life. The previously homogenous Dodowa society became transformed socially and economically. As Dodowa inhabitants interacted with various Europeans in the nineteenth century, they developed a strong taste for European material and non-material culture through borrowing and imitation, and this led to fusion of African and European cultural elements. These Dodowa inhabitants became acculturated and hybridised thereby creating new Africans. This was the beginning of incorporation of Dodowa into the global system and the beginning of modern way of life in nineteenth century Dodowa.

Trade and Danish colonial impacts in Dodowa

One of the after-effects of the Danish plantation economy in Dodowa was the legacy of commercial activities (involving Europeans and local people) which made Dodowa an important commercial centre from the nineteenth century to the twentieth century. This offers us the opportunity to know how indigenous people of Dodowa responded to the colonial legacies that resulted from the Danish plantation economy and European contacts in general. During the oral interviews that I conducted in 2015, it was observed that the Lower Dodowa suburb is still characterised by the scenes of numerous extant European/colonial merchandise outlets, comprising buildings used by Joseph Wulff (Danish), UAC (British) and UTC (Swiss).

All these trading entities jostled for the trading opportunities that abounded in Dodowa. The historical heritage of Dodowa is actually founded on this long legacy of merchandise

involving both European and indigenous merchants. Apart from the European buildings, wealthy indigenous merchants built their houses in conformity with the architectural styles of the Europeans. Some local builders incorporated stone blocks (remnants from Frederikssted plantation) into walls of their houses to make them look like those of the Europeans to bring harmony in the built environment and also to show opulent class in Lower Dodowa. Does this really connote a shift of Metropolitan interests from slave trading to 'legitimate' trading? Critical appraisal of the Danish political/plantation economy, particularly focusing on the impact of imperial domination of trading activities in Dodowa, is still couched in terms of slave labour, which the merchants amply utilized to propel their trading activities in Dodowa.

There are several sources of evidence to show that many slaves were kept within Africa. When the trans-Atlantic slave trade ground to a shutdown, slaves on the 'local markets' nonetheless increased. These slaves were to be used for different kinds of labour including transporting trading goods. These merchants did not only become wealthy during the eighteenth and nineteenth centuries but also amassed substantial amounts of capital (Klein 1990, p. 239). Unfortunately, however, most of that capital accumulation took the form of slaves. Through this use of slave labour for non-agricultural activities, Lower Dodowa thus became an island of growth and prosperity in sharp contrast to the rest of the town. This gives us the opportunity to analyse the causality underlying the relationship between slave labour and economic development at Lower Dodowa.

Slave labour, which appeared to be the backbone of the vigorous mercantile activities in Dodowa, further strengthened the purchase and export of plant products. Palm oil in particular became a prominent product because of high demand for it in Europe for the manufacture of soap and for maintenance of the machines of the ever-growing industrial revolution (Winsnes 2013, p. 4). The production and export of palm oil was a well developed trade since it was one of the essential commodities in the provisions trade, serving as a major food and medical item that slave ships procured for the Middle Passage to the New World. According to Jepessen (1966, p. 70), the palm oil that passed through Dodowa was sourced from Akuapem, about 30km north of Dodowa, where the last Danish governor (Governor Carstensen 1842-50), in 1843 had made special arrangements for the Akuapem to supply Denmark with palm oil. As was always the case with European/colonial traders in West Africa, forging alliances with the native people was a

sine qua non for smooth trading activities (Winsnes 2013, p. 6). The Akuapem, who had become allies of the Danes at the time, were connected to Dodowa by the famous historic footpath (Figure 5.2) that runs through the Dodowa Valley. The palm oil business in particular was one of the successful non-human trading activities and its detailed economic-historical description in future studies would give an interesting understanding of the role of palm oil and how it was connected with Danish activities in the Gold Coast, and further understand Dodowa as an entrepôt.

One of the probable impacts of the Danish plantation/political economy is the ethnic transformation at the areas of the plantation comprising Dodowa and the Accra plains. Though there are no records as to what happened to slaves when the plantations collapsed, the servile populations, who were of different ethnic backgrounds, most likely became integrated into the nearby local communities. Slavery in all its forms led to general insecurity of life in the nearby Accra plains, as well as the hilltop settlement at Krobo Mountains (about 15 km from Dodowa) which also served as a refugium for many stranded and runaway slaves during the latter part of the nineteenth century (Huber 1993, p. 32; Wilson 1995, pp. 7-8, 15-17).

The asymmetrical power relations that were instituted through slavery and the plantation system seemed to have created or reinforced social inequality and subjugation of Africans. This created elites (the Danish planters and some local people). The Danish planter/elites, in particular, consumed labour as well as food and raw materials out of the sweat of enslaved Africans who were forced to be accustomed to taking orders on a daily basis to engage in plantation work. As Ghana, and the rest of West Africa for that matter is still struggling with the residual effects of the trans-Atlantic slave trade, which became a global scandal since the fifteenth century, archaeology remains one of the vital areas that can highlight both the African and the European experience in the slave trade. The range of archaeological data and the post-plantation legacies in Lower Dodowa presented in this thesis represent tangible evidence of the daily activities, subsistence, personal adornment, exchange system, leisure and general lifestyle of the people who lived on the plantation as well as in Lower Dodowa. The Frederikssted plantation ruins, the excavated materials (both local and foreign), and extant European merchandise outlets in Lower Dodowa are part of the entities that can be described as the preserved witnesses of international commercial exchanges, slavery, colonisation and cultural contacts that

Dodowa has had since the onset of the Danish plantation system beginning in 1788 in Ghana.

It is apparent that the people who lived on Frederikssted plantation comprised European planters, African slaves, and local free unslaved people who together created and shaped the Frederikssted archaeological landscape. However, the main causality of this continuous occupation is the contact created by the Danish plantation economy and the attractiveness of the Dodowa valley environment. Indeed, it can be well argued that most former Danish slave plantations have served as housing units for free people who occupied them after the plantations collapsed. For this reason, when plantation archaeologists limit the interpretation of plantation finds to plantation owners and enslaved workers, we may either miss or misinterpret some of the material culture from the excavations. The materials may come from the same archaeological context but may not necessarily come from the same historical context. The historical context may vary in relation to the slave/plantation period and the post-plantation free and unslaved occupants' period. Frederikssted plantation archaeological data presented here suggest that interpretation of plantation finds goes beyond the dichotomy between slave and master. This thesis has also shown how archaeological research at Frederikssted plantation can be used to provide understanding of the many issues embedded in the wider sweep of the entire Danish plantation system in Ghana. As I have already discussed, one purpose of this thesis is to expand archaeologists' perceptions of the Danish plantations in Ghana by examining the reoccupation of the plantation site by local elite who were neither plantation owners nor slaves. It is my expectation that this thesis will arouse new research questions (and provide answers) regarding what happened to the Danish plantations in Ghana and other plantations elsewhere after they were abandoned. The thesis has challenged currently held viewpoints that, slave plantations were mainly occupied by the plantation owners and their enslaved workers. It is hoped that the thesis would spur future archaeological researches about slave plantation system in Ghana to be formulated outside the currently held views, which limit plantation occupation to only enslaved people and their masters. Any future research to be conducted at Frederikssted plantation catchment area will pivot around the archaeological data presented in this thesis. Questions relating to slave lifeways during the plantation era would be an important subject to investigate.

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